EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AND ATTITUDE TOWARDS THE HAZARDS OF EATING FAST FOOD AMONG EARLY ADOLESCENTS IN SELECTED SCHOOLS AT ODDANCHATRAM

A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

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BY

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CERTIFICATE

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EXAMINERS

1. **_____**
2. **_____**

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ABSTRACT

A study was done to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude towards the hazards of fast food among early adolescents.

The objectives of the study were

- To assess the pretest and post test level of knowledge and attitude towards hazards of fast food among early adolescence in the experimental and control group.
- To evaluate the effectiveness of video assisted teaching program on hazards of fast food among early adolescence.
- To correlate the knowledge and attitude towards hazards of fast food among early adolescence.
- To find out the association between level of knowledge and attitude with selected demographic variables regarding hazards of fast food among early adolescence.

The conceptual framework of the study was based of Nola Pender Health Promotion Model (1997). A quantitative evaluative research approach with experimental (pretest, posttest control group) design was adopted. A total 80 samples were used in this study by stratified random sampling technique. A structured questionnaire and check list type attitude scale was used to assess knowledge and attitude related to hazards of fast food. Video assisted teaching programme was administered among early adolescents. The data collected were tabulated in 12 tables and 4 figures and analyzed by using descriptive and inferential statistics.

The results showed that, Majority of the students in control group (82.5%) had inadequate knowledge; and few of them (17.5%) had moderate knowledge about

hazards of fast food in pre test and post test whereas in experimental group most of the students (75%) had inadequate knowledge in the pre test, and in the post test very few students (5%) had inadequate knowledge.

Majority of the students in control group had favorable attitude (67.5, 65%) and very few had unfavorable attitude (5%, 5%)in pre test and post test whereas in experimental group majority students had favorable attitude (80%) and very few had moderately favorable attitude (5%) in pre test. After the video assisted teaching programme on fast food hazards almost all the students (95.5%) except few developed favorable attitude towards the hazards of fast food in experimental group.

The overall pretest and posttest knowledge in control (t-6.32) and experimental group (t-13.65) and between control and experimental (t-13.14) was found highly significant and also attitude of early adolescents between control and experimental group(t-2.0945) and before and after video assisted teaching programme in control group (t-6.32) and experimental group (t-13.65) was found statistically significant at $P<0.001$.

The study findings revealed that there was a positive correlation between posttest level of knowledge and level of attitude($r=0.414$) at $P<0.001$.

There was significant association between level of knowledge and attitude of early adolescents and habit of taking fast food in control and experimental group.

This study concluded that, the video assisted teaching programme could effectively increase the knowledge and attitude towards the hazards of fast food among early adolescents. This study clearly stated that, health education plays a vital role in improving knowledge and attitude towards the hazards of hazards of fast food.

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CHAPTER I

INTRODUCTION

"Don't dig your grave with your own knife and fork."

-English Proverb

Next to air we breathe and water we drink, food has been basic to our existence. Food is necessary for energy, for growth, repair, and for health. Our health depends on what we eat daily. Now in these days most people like fast food and it is very popular among adolescents.

Adolescence came from a Latin word, adolescence meaning “to grow up”. It is the period in Development between the onset of puberty and adulthood. It usually begins between 11 and 13 years of age with the appearance of secondary sex characteristics. The teenage, gets terminate at 18 to 20 years of age with the completion of the Development of the adult form. During this period, the individual undergoes extensive Physical, psychological, emotional, and personality changes.

Adolescence is associated with search for independence, identity and changes in lifestyle. During child hood and adolescence period, the most individuals develop and establish a lifestyle with in which a range of health behaviors is embedded. However, during adolescence, young people take part in the process of separating from parents, resulting in a decrease in parental influence on health behaviors as age increases. Unable to cope up with the rapidly changing world, the bodies and minds of adolescence have taken a battering.

Nutritional diet intake during adolescence is important for growth, long-term health promotion and development of lifelong eating behaviors. Nutritional intake during this period may have long term health implications. Several physical, psychological and behavioral changes may affect food habits during adolescence and have long term consequences on adult health status. (Carine 2004).

BACKGROUND OF THE STUDY

In today's world scenario, Fast food has become a prominent feature of diet for adolescents. The rapidly changing food consumption patterns and diet transition emerging in the society due to economic growth and new lifestyle choices, demands variety food products .It is clear that fast food is generally unhealthy. Many research studies showed that consuming fast food has nutritional hazard and it provides only empty calories. This kind of food has no vitamins and minerals. Fast food is loaded with saturated fat and high calories, and low in fiber and nutrients. When these types of foods are eaten, the body is forced to produce its own enzymes to convert the empty calories into usable energy. From this it is clear that fast food will cause obesity and associated health hazards.

According to a national survey (2003), at least 30% of the adolescence have bad teeth, 17% are overweight teenager is now a very visible urban phenomenon. In Delhi and Chandigarh, one in every four teenagers is obese, while the school children in Chennai showed 18%boys and 16%girls are overweight. It showed that adolescence aged between 13-15 years is consuming more fast food.

The United States 'Department of Agriculture' (2009) recommended daily intake for a normal adolescent is 2100 K calories and maximum of 93g of fat. A meal

at a fast food outlet-burger, fries, drink and dessert can deliver almost all of that in a single serving.

National Center for Chronic Disease Prevention and Health Promotion (2012), stated that the incidence of child obesity has more than tripled in the past 30 years. The prevalence of obesity among adolescents aged between 12 to 19 years has been increased from 5.0% to 18.1%. Obesity is the result of caloric imbalance and it is mediated by genetic, behavioral, and environmental factors. Childhood obesity has both immediate and long-term health impacts.

The concept of fast food is well defined by the term fast food itself. Food that can be cooked 'fast' is fast food. Fast food is any food that is quick, convenient, and usually inexpensive. The advancements in food process industry, lower costs, and delicious food, makes fast food a favorite choice of a large number of people worldwide. However, fast food is inexpensive because it is usually made with cheaper ingredients such as high fat meat, refined grains, and added sugar and fats, instead of nutritious foods such as lean meats, fresh fruits, and vegetables**.**

Fast food is a growing component of our diet, and the frequency of fast-food use has increased dramatically per year. Fast food is especially popular among adolescents, who on average visit a fast-food outlet twice per week.

In India so many fast food restaurants and street foods shops are developing day by day. At the same time the disease rate increases like nutritional problems such as diabetes, hypertension, cancer, hypothyroidism etc. Peoples are consuming them because of taste, easily available, cheap etc, without knowing the bad effects that can happen.

Eating frequent fast food causes teens and young adults to gain more weight and they face an increased risk of developing obesity. Body mass index (BMI) is acceptable for determining obesity for children. The normal range for BMI in children varies with age and sex. The first problem to occur in obese children is usually emotional or psychological. Childhood obesity however can also lead to life-threatening conditions including diabetes, high blood pressure, heart disease, several types of cancer, and osteoarthritis and other disorders. Even though fast foods are tastier and easily available, it has become the biggest supporter of cancer. These eatables are stuffed with loads of fat that increases the level of cholesterol in the body and invite obesity, which is believed to be 'Mother of Cancer'.

According to the Centers for Disease Control and Prevention, one in 10 Americans suffers from depression, and diet might be a big part of the problem. A study published in March 2012 in "Public Health Nutrition" followed nearly 9,000 people who had never been diagnosed with depression. The results showed that people who ate fast food had higher rates of depression compared to those who did not. The more fast food participants ate, the more likely they were to be depressed.

Children and adolescents who are obese are at greater risk for bone and joint problems, sleep apnea, and social and psychological problems such as stigmatization and poor self-esteem. Some of the other disorders would include liver disease, early puberty or menarche, menstrual disorders, eating disorders such as anorexia nervosa and bulimia, skin infections, asthma and other respiratory problems. Studies have showed that overweight children are more likely to grow up to be overweight adults. Obesity during adolescence has been found to increase mortality rates during adulthood. The diet modification is the main prevalent measure. Thus, the modification should take place during the childhood. The dietary habits are determined by familial and cultural factors rooted in childhood and adolescents.

In India 25% of population are adolescent so it is important to maintain their health status by avoiding fast food and start to take healthy foods and to become better adult and citizen .It will be helpful in prevention of health issues and problem in adolescents. A study like this is very much essential to take adequate measures to have healthy life style in adolescents by health education about effects of fast food. Each individual is important to make well to do community and will reflect on world.

With all these background the investigator selected this topic for creating awareness among early adolescents regarding the fast food hazards through video assisted teaching programme.

NEED FOR THE STUDY

Adolescence is a fascinating period of life that marks the transition from being a dependent child to becoming an independently functioning adult. Because of the young age structure of India's population, government of India recognized adolescence as "vulnerable groups". So the health needs of adolescence have been addressed.

Now days the number of fast food restaurants and the consumers are increasing comparing to olden days. The main fact is that the major consumer groups are adolescents. Lack of knowledge regarding fast food and its health consequences is the main factor behind this hiking trend.

Adolescence is the only time following infancy when the rate of growth actually increases. This sudden growth spurt is associated with hormonal, cognitive, and emotional changes that make adolescence an especially vulnerable period of life nutritionally. If we discuss about eating pattern of adolescents or teenagers than it is concluded that after-school activities, active social lives and busy schedules may lead

to meal skipping. Their diet includes burgers, pizza, hotdogs, and cold - drinks. However by eating Junk food, a teenager will not get any nutrients required for proper functioning of the body. Junk food is full of fat and calories; a lot more than what is required for the body on a daily basis. This makes the teenager more prone to heart disease. Research had showed that Junk food consumption is linked to behavioral disorders. Many people, especially children, suffer from ADHD (Attention deficit hyperactive disorder) due to additives and added sugar in Junk food. Drinking a single 330 ml can a day of sugary drinks translates to more than one pound (0.45 kg) of weight gain every month. According to NSS (National Sample Survey) data for the category beverages, refreshments and processed foods, the money spent on Junk food in India was almost 25 per cent higher than the Rs 33,000-crore spent on edible oils. According to NFHS (National Federation of State High School Associations) there is a list India ranked in order of percentage of people who are overweight or obese in which Punjab is in first position. Government surveys have shown that at least 16% of children and adolescents age 6 to 19 years old are considered overweight and at least 11% adolescents now are classified as obese.

Ludwing D et al.(2009), conducted a perspective, observational analysis on relationship between consumption of sugar- sweetened drinks and childhood obesity showed that 30% of children aged 13-16 years are overweight or in the risk of overweight. This study focuses on the trends in childhood nutrition over the past few years, such as changes in fast food and soft drink consumption. This way the study explains the increasing prevalence of overweight in children and critically addresses the issues contributing to these changes in nutrient intake.

Hodges (2003) conducted a cross-sectional study among public and private schools at Samas city, about 1,253 students were selected as samples by the multiple

random technique. Weight and height were measured to correlate the body mass index (BMI). The result showed that over weight was 6.2% and obesity was 1.8%. Thus, it was concluded majority of the adolescents had poor knowledge on health hazards of fast food. As an educator and health promoter, nurses have the responsibility to educate adolescents about health hazards of fast food consumption.

Finkelstein, Hill and Whitaker (2008) have been shown that adults who become obese in childhood continue on to become obese adults approximately 77%. A key role of nurses is to educate the people on various aspects about healthy practices in a variety of settings such as children's healthcare appointments, schools, community organizations, health fairs and childcare centers.

Seminar held on "problems in adolescents", organized by Sri Durga Malleswara et al(2001). Dr. Madhavi said that polycystic ovary syndrome was a common problem among many teenage girls and young women. "Obesity is contributing to problems like irregular periods, which will ultimately lead to growth of unwanted hair and acne". She said that most of the problems could be addressed by making a little change to the diet schedule on adolescents. It is a common practice among teenagers to take pizza, burgers, French fries and chips between the meal and to avoid this fast food completely.

A study conducted by Anderson and Butcher (2006) regarding ill effects of fast food on adolescents revealed that partially hydrogenated oils, also known as transfat, are found in many baked goods, snack foods, fast foods, and street foods. Consumption of transfat has been linked to negative changes in lipoproteins, systemic inflammation, coronary heart disease, and diabetes mellitus.

An evaluative study was conducted by Koh, Vivienme (2003) to investigate the meaning of health and unhealthy eating habits and the importance of healthy eating habits among adolescents. Findings suggest that interventions are needed that assists adolescence with the translation of their knowledge into healthy eating behavior. Planned teaching programme should help in making the healthy eating habits, aimed at reducing the health problems of adolescent by reducing children's consumption of unhealthy food and soda drinks.

From all the above research studies it is evident that the adolescents are tend to consume plenty of fast-food which has an impact on their behavioral pattern, health and academic performances. When the investigator came across to these issues and felt that there is a strong need for conducting teaching programme on health hazards of fast food consumption among high school students. Thus the investigator selected this topic for creating awareness among early adolescents regarding the fast food hazards through video assisted teaching programme.

STATEMENT OF THE PROBLEM

A study to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude towards hazards of eating fast food among early adolescence in selected schools at Oddanchatram.

OBJECTIVES

1. To assess the pretest and post test level of knowledge and attitude towards hazards of eating fast food among early adolescence in the experimental and control group.
2. To evaluate the effectiveness of video assisted teaching program on knowledge and attitude towards hazards of eating fast food among early adolescence.

3. To correlate the knowledge and attitude towards hazards of eating fast food among early adolescence.
4. To find out the association between pretest level of knowledge and attitude with selected demographic variables regarding hazards of eating fast food among early adolescence.
5. To find out the association between pretest level of knowledge and attitude with selected variables related to fast food among early adolescence.

HYPOTHESIS

H_1: The mean post test level of knowledge and attitude will be significantly higher among the early adolescence in experimental group than the mean pretest level.

H_2: The mean post test level of knowledge and attitude in experimental group will be significantly higher than the mean post test in control group.

H_3: There will be a significant correlation between level of knowledge and attitude on hazards of eating fast food among early adolescence in selected schools at Oddanchatram.

H_4: There will be a significant association between level of knowledge and attitude on hazards of eating fast food and selected demographic variables.

H_5: There will be a significant association between fast food usage and level of knowledge and attitude towards hazards of fast food.

OPERATIONAL DEFINITIONS

Effectiveness

In this study it refers to determine the extent to which the Video teaching programme on hazards of fast food has achieved the desired effect, as expressed by gain in Post test knowledge and attitude scores.

Video assisted teaching programme

In this programme first facilitator guides the discussion; Secondly video CD that comprised of organized and sequential representation of information regarding hazards of eating fast food. It includes definition, types, ingredients, and hazards of fast food and prevention of fast food hazards.

Knowledge

It refers to the responses given to structured questionnaire regarding hazards of eating fast food among early adolescence.

Attitude

It refers to the way of thinking, believes and feelings regarding hazards of fast food as expressed in the form of statement as assessed by using checklist.

Fast food

In this study it is refers to the foods that are high in salt, fat or caloric value low nutritive value foods which directly or indirectly pose health hazards.

Hazards of fast food

In this study it refers to consumption of fast foods, that impose a health problem either acute (immediate) or chronic (long-term) exposure to it. This study

includes the hazards like obesity, heart diseases, cancer, psychological disorders, diarrhea, eating disorders bone and joint disorders etc.

Early Adolescence:

In this study it refers to high school students' age group between 13and15 years studying 8^{th} and 9^{th} standard.

ASSUMPTIONS

The study assume that

- Students come from educated family background may have knowledge towards the hazards of eating fast food
- The knowledge and attitude of early adolescence will influence their practice towards the hazards of eating fast food.
- Health education at regular intervals will improve their knowledge and promotes attitude, practices among early adolescence
- Demographic variables of early adolescence may or may not influence knowledge and attitude towards the hazards of eating fast food.
- Nurses have the responsibility in promoting the knowledge of school children.

DELIMITATION

The study was limited to

- early adolescence with age group between 13 and 15 years from Oddanchatram only.
- selected schools at Oddanchatram
- data collection period for 6 weeks
- students who can read and write Tamil

PROJECTED OUTCOME

- The findings of the study would help to identify the level of knowledge and attitude of early adolescence about hazards of eating fast food.
- The development of the video assisted teaching programme will help to improve knowledge and attitude towards the hazards of eating fast food among early adolescence.
- The video assisted teaching programme should enable the learner to grasp the information more easily and it remains in their mind for longer.

Summary

This chapter has dealt with the background of the study, need for the study, statement of the problem, objectives of the study, hypothesis, operational definition, assumption, delimitation and projected outcome.

Organization of the report

Further aspects of the study are presented in the following four chapters

In chapter II, Review of literature and conceptual framework

In chapter III, Research methodology is presented which includes, research design, setting, population, sample and sampling technique, data collection, tool description, validation, and reliability of tools, pilot study, data analysis and conceptual frame work.

In chapter IV, Analysis and interpretation of data was presented in terms and descriptive and inferential statistics.

In chapter V, Discussions,

In Chapter VI, Summary, conclusions, implications, recommendations and limitations are presented.

The reports end with selected references and annexure.

CHAPTER II

REVIEW OF LITERATURE

A literature review is the background for understanding correct knowledge on the topic and illuminates the significance of new study.

A Literature Review involves the systematic identification, location, scrutiny and summary and written materials that contain information on the research problem.

(Polit and Beck, 2007).

This chapter deals with a review of published and unpublished research studies and from related materials for the present study. This review helped the Researches in building the foundation of the study.

The review of literature in this chapter is presented under the following headings

1. **Studies related to changing trends in eating pattern and promoting factors of eating fast food among adolescents,**
2. **Studies related to knowledge and attitude regarding fast food hazards among adolescents,**
3. **Studies related to health hazards of fast food,**
4. **Studies related to effectiveness of video assisted teaching programs.**

1. STUDIETS RELATED TO CHANGING TRENDS IN EATING PATTERN AND PROMOTING FACTORS OF EATING FAST FOOD AMONG ADOLESCENTS:

Coonka A et al., (2011), conducted a study to determine the relationship between watching television during meals and children food consumption pattern in 91% parents-child pairs. Children were in 10-14 years of age group. Non-consecutive 24 hours dietary recall was done with each child. The result showed that there was significant association between television and children consumption of caffine. Children from families with high TV viewing derived 5% more of their energy intake from pizza, salty snacks and soda.

Nelia P Steyn (2011) conducted a cross-sectional survey to find out the factors which influence the consumption of street foods and fast foods in South Africa, administered questionnaires in 11 official languages were conducted at the participants' homes using structured interview techniques. A nationally representative sample (n = 3287) was drawn from all ethnic groups, and provinces including participants 16 years and older. Logistic regression was done to evaluate factors impacting on fast food consumption. Results stated that, frequent (2 ≥ times/week) street food consumption ranged from 1.8% to 20.6% in Limpopo; frequent (2≥ times/week) fast food consumption ranged from 1.5% to 14.7% in Gauteng. The highest intake of street food was in the medium socio-economic category (14.7%) while the highest intake of fast foods was in the high socio-economic category (13.2%). Purchases of soft drinks ranged from 4.8% in whites to 16.4% in blacks and savoury snacks from 2.3% to 14.5% in whites and blacks, respectively.

Nielsen SJ, et al., (2010), a national health and nutrition examination surveys were conducted in USA to determine the adolescent's beverage consumption trends and causes. The sample consisted of 73,345 individuals aged 12-16 years and semi structured questionnaire was used to collect data. The results of the study showed that among these subjects sweetened beverage consumption increased and milk consumption decreased. Overall energy intake from sweetened beverages increased by 85% and was reduced by 38% from milk with a total calorie of 278. This trend was associated with increased proportion of adolescents consuming sweetened beverages and decreased in milk consumption. This study recommended the beneficial impacts of decreased soft drink and fruit drink intake.

Bell AC, et al., (2009) conducted a cross sectional study in USA to describe foods and beverages consumed at schools in terms of number of serves. The data have been collected from 1001 children aged 4-12 years. Food and beverages intake was assessed using a school food check list. The result of the study showed that 30% of children had fruits. 59% had packed snacks and 26% had chocolates, during their lunch and coffee breaks and 10% of children reported using the canteen and fast foods were the most frequently purchased items.

Jacson P. et al.(2008) conducted a study on increased consumption of junk food and snacks in recent years its association with marketing strategies. The study was conducted among 400 adolescents in the age group of 13-18 years, by using junk food consumption questionnaire. The study showed that the availability of junk foods and snacks are at low prices and marketing had triggered increased consumption of junk foods. The contribution of snacks to daily energy intake among children was increased by 30%. This study recommended that education about junk food consumption and health eating habits in the family should be strengthened.

Larson NI et al, (2008) conducted a longitudinal study at Minnesota to describe the changes in fast food intake during the transition from middle adolescence to young adulthood, and to identify baseline that correlates this eating behavior in early young adulthood. Frequent fast food intake is associated with poorer diet quality and greater weight gain. Data were drawn from Project EAT, a population-based, study Surveys were completed by 935 females and 751 males in high school classrooms at baseline (mean age = 15.9 years) and by mail at follow-up (mean age = 20.5 years).Frequent intake of fast food (> or =3 times/week) was reported by 24% of males and 21% of females during adolescence. At follow-up, in early young adulthood the eating behavior is being increased among males (33%), and there was no further increase among females (23%). Baseline snack frequency was positively associated with frequency of fast food intake at follow-up among both genders. Baseline peer support for healthy eating among males and both concern about health and self-efficacy for healthy eating among females were inversely related to follow-up for fast food intake. Among females, baseline perceptions of time and taste barriers to healthy eating, lunch frequency, television viewing. Interventions are needed to address the high prevalence of frequent fast food intake among adolescents and young adults. This study recommended that the health professionals should help young people to identify convenient and healthy food choices for meals and snacks to be consumed away from home.

Zhu SP, Ding YJ, et al, (2008) conducted a questionnaire survey at Beijing, Haidian District to investigate the consumption of ten types of junk food practices in 1019 children and adolescent aged 8-16 years. One month prior to the study 97.50% of the children and adolescent had eaten at least one type of junk food and 15.88% of them had eaten all types of them. Rates on having eaten deep fried food, pickled food,

processed meat products, biscuits, coke or alike drinks, convenience/fast food, canned food, dried or preserved fruit, cold and sweet food, barbecue food etc. appeared to be 70.43%, 60.14%, 79.72%, 64.24%, 69.63%, 78.72%, 42.16%, 51.95%, 68.13%, 60.14% respectively. The rate on eaten more than once a day of these ten types were 26.95%, 36.88%, 34.84%, 32.97%, 27.40%, 28.18%, 37.91%, 26.15%, 37.39%, 22.10% respectively. Most of the surveyed children and adolescent did not have correct idea on nutrition of junk foods. They received the information on junk foods mainly from resources as advertisements on TV (67.95%), mothers (9.02%), newspapers or magazines (6.71%). Many factors, such as individual factors (including physiological and psychological situations), social factors, family factors and the characteristics of food contributed for eating the junk foods among children and adolescent. Education strategies on nutrition should be developed and launched in order to help children to develop their own healthy eating behaviors.

Kolahdooz f et al., (2006) conducted a study on urbanization and media propaganda replaced traditional nutritious snacks by low-quality junk foods. In this study, 16418 adolescents in the age group of 13-17 years were chosen, to determine their dietary intake using a food frequency questionnaire. The results showed that consumption of junk food during the preceding week was observed as 90.3% and 88.7% of urban and rural children respectively, whereas conventional snacks were consumed about 34.7% and 28% of urban and rural children. Weekly frequency of consumption of junk food was higher than major food items such as meat and eggs (9Vs3 times weekly). This study denoted that replacement of conventional snacks with industrial and processed products is attributable to industrialization and urbanization, increased media coverage and lifestyle changes in both urban and rural regions.

Bishav M, Naveen et al. (2005) conducted a study on prevalence of sustained hypertension and obesity in urban and rural school going children in Ludhiana. A total of 2467 adolescent school children aged between 11-17 years from urban area and 859 students from rural area were taken as subjects. Out of 3326 students, 189 were found to have sustained hypertension in urban area. The prevalence was 6.69% (n+165); and in rural area it was 2.565. There were 287 (11.63%) over weight students in urban area and 44 (4.7%) in rural area. This is possible related to their sedentary life style and consumption of junk food.

2. STUDIES RELATED TO KNOWLEDGE AND ATTITUDE REGARDING FAST FOOD HAZARDS AMONG ADOLESCENTS:

Razan Elhassan H., Eman Gamal et al., (2013) conducted a Cross-sectional study to assess knowledge, attitudes and practices of fast food among university students. Knowledge, attitudes and practices, socio-demographic factors, food frequency, weight, height, waist circumference (WC) and body mass index (BM) were evaluated and data collected using a structured dietary questionnaire. The results revealed that 42% of the students get their knowledge from the media. (73.4%)), and hazards of low intake of fruits and vegetables (p-value 0.000).Results from nutritional attitude reveals that only 46.3% of students attempt to eat healthy. 65.1% find it difficult to eat healthy in university cafeterias, 50.6% find it hard to have time to plan healthy diet, while 50.6% enjoy eating unhealthy food. BMI results showed that only 46.6% of students are of a normal weight while 61% of students have an ideal WC. The study suggests lack of adequate knowledge on hazards of fast food among students. Media was the major source of information and not all students were aware of the health hazards of soft drinks and low intake of fruits and vegetables. The

significant association between the students' study field and their knowledge magnifies the role of education. The study concluded that the students' knowledge and attitude need to be improved by studies nutrition education programmes.

Vandana Sharma (2013) conducted a Pre-experimental study to assess the effectiveness of structured teaching program on knowledge regarding harmful effects of Junk food among adolescents. This study was conducted in 3 selected schools at District Jalandhar, Punjab. Total 60 adolescents those who met the inclusion and exclusion criteria were selected by non probability convenience sampling technique. The pre-test was taken by using self structured questionnaire followed by structured teaching programme. After 7 days post- test was taken. The mean percentage of the knowledge score of post test (22.88) was higher than pre test (12.96). The 't' value for total pre test and post test was 16.76.The difference between pre-test knowledge score and post test knowledge scores was 9.92. It means the knowledge score increased after structured teaching programme. The associations between the demographic variables were not significant with the knowledge and attitude of adolescents. The findings of study reveal that the education had a vital role in improving the knowledge of adolescents regarding harmful effects of Junk food.

Dave JM[1], An LC, Jeffery RW, Ahluwalia JS (2009) conducted a study to examine the association between attitudes toward fast food and the frequency of fast-food intake in adults. This study is a cross-sectional evaluation of random digit-dial telephone surveys to identify patterns of eating away from home and attitudes toward it. Participants included 530 adolescents. Attitude toward fast food was measured using an 4-dimensional scale: perceived convenience of fast food (alpha=0.56); fast food is fun and social (alpha=0.55); fast food perceived as unhealthful (alpha=0.45);

and dislike toward cooking (alpha=0.52). Frequency of fast-food intake was found to be significantly associated with age (P=0.001), gender (men>women). Additionally, frequency of fast-food intake was also found to be significantly associated with perceived convenience of fast food (P<0.001) and dislike toward cooking (P<0.001) but not with perceived hazards of fast food (P=0.207). These findings suggest public education regarding the hazards fast food may not influence fast food consumption. Interventions targeting the issue of convenience and quick or efficient preparation of nutritious alternatives to fast food could be more promising.

3. STUDIES RELATED TO HAZARDS OF FAST FOODS:

Collision K.S et al., (2010) conducted a study at Saudi to examine the dietary habits in relation to body-mass-index (BMI) and waist circumference (WC), together with exercise and sleep patterns in male and female school children, in order to ascertain whether dietary patterns are associated with obesity phenotypes in this population. 5033 boys and 4400 girls aged 10 to 19 years were participated in designed Food Frequency Questionnaire which is used to asses BMI and WC. The BMI and WC measurements were obtained and correlated with dietary intake. The overall prevalence of overweight and obesity was 12.2% and 27.0% respectively, with boys having higher obesity rates than girls. WC and BMI were positively correlated with sugar-sweetened carbonated beverage (SSCB) intake in boys only. The association between male BMI and SSCB consumption was significant in a multivariate regression model (P <0.0001). SSCB intake was positively associated with poor dietary choices in both males and females. Fast food meal intake, savory snacks, iced desserts and total sugar consumption correlated with SSCB intake in both boys ($r = 0.39$, $P < 0.001$) and girls ($r = 0.45$, $P < 0.001$). Older children where

reported that they were eating significantly less fruit and vegetables than younger children; and less eggs, fish and cereals. Conversely, consumption of SSCB and sugar-sweetened hot beverages were higher in older versus younger children. BMI and WC were negatively correlated with hours of night-time sleep and exercise in boys, but only with night time sleep in girls. It also showed the lowest frequency of exercise among girls and boys. A higher intake of SSCB is associated with poor dietary choices. Male SSCB intake correlates with a higher WC and BMI. Limiting exposure to SSCB could therefore have a large public health impact.

LiM, Dibley MI, et al (2010) conducted a cross-sectional study at Xi'an City, China to explore the association between dietary habits overweight and obesity among adolescents. A sample of 1804 adolescents was recruited from 30 junior high schools in six districts of Xi'an City, northwest China. Weight and height was measured and eating habits were assessed using a self-administered questionnaire. Logistic regression was used to identify dietary patterns associated with overweight and obesity and adjusted for socio-demographic factors. In boys, an increased consumption of soft drinks was associated with increased risk of overweight and obesity (95%), while consuming preserved fruit was associated in girls, having breakfast outside the home and an increased consumption of energy-dense foods was associated with increased risk of overweight and obesity, while frequently having foods and beverages outside for three main meals was associated with decreased risk. The study concluded that consumption of fast foods were positively associated with overweight and obesity in adolescents. Future health education programs should be initiated to prevent excess weight gain and target such unhealthy eating habits.

Francies D.K et al., (2009) conducted a study at Jamaica to estimate the prevalence of overweight, obesity and high waist circumference (WC) in 15-19-year-old adolescents and to investigate the association with fast-food and sweetened beverage consumption. This study enrolled 1317 (598 male, 719 female) adolescents using multistage, nationally representative sampling method. The overall prevalence of overweight, obesity and high WC was approximately 15 %, 6 % and 10 %, respectively. Obesity (8.0 % in females, 3.3 % in males) and high WC (16.2 % in females, 1.7 % in males) were significantly more prevalent in females when using internal Z-score cut-offs High WC was associated with the absence of fruit consumption (P = 0.043) and overweight with high sweetened beverage consumption (P = 0.018). Overweight occurs frequently among Jamaican 15-19-year and was associated with increased consumption of sweetened beverages. High WC was more prevalent among females and was related to low consumption of fruits and vegetables. Measures to reduce the consumption of sweetened beverages and increase fruit intake may reduce the prevalence of excess body fat among adolescents.

Aieen L, Hans D (2005), an article on food and disease showed that drinks that contain phosphorus (especially colas) could lower the level of calcium in the blood causing osteoporosis. Soda pop adds unnecessary, non-nutritious calories to the diet leads to overweight. Obesity increases the risk of diabetes and cardiovascular diseases and cause severe social and psychological problems. There was a direct relationship between phosphoric acid present in cola beverages and development of kidney stones. Caffeine present in soft drinks can cause nervousness, irritability, sleeplessness and headache. Several additives used in soft drinks cause occasional

allergic reactions. High sugar diets may contribute to heart disease in people who are insuli9n resistant. Artificial sweeteners like saccharine and aspartame has been linked with urinary bladder cancer.

Cho J Han Y (2005) conducted a survey on higher secondary school students in December 2004 to identify their perceived knowledge and attitude towards fast foods hazards. The population in this study consisted of 1,050 middle and high school students aged 14~19 from five school districts in Bussan, Korea. The survey data were collected after trained school teachers administered the survey in their classrooms. The student survey was completed by 968 students (response rate:92%) which included 541 middle school and 435 high school students. The findings of the current study cannot be generalized for all adolescents' perception and attitudes about fast foods throughout the world, not even Korea; however, these findings are in agreement with the limited numbers of studies published on the similar topics in other countries, though food habits often differ from countries. Intervention to reduce frequency of fast food consumption or to improve the food choices at fast food restaurants may need to address not only the perceived convenience but also the importance of nutritious and healthy eating habits among adolescents.

French SA,Story M, Jeffery RW (2005) conducted a study on the participants, who were part of the Coronary Artery Risk Development in Young Adults (CARDIA) study, received dietary assessments over a 15-year period. According to the study, men visited fast-food restaurants more frequently than women and blacks more frequently than whites. Black men reported an average frequency of 2.3 visits per week in 2000-01. White women had the lowest frequency, at an average of 1.3 visits per week in 2000-01.

Magrland C. et al, (2005), conducted an observational study on 1,335 boys and girls aged between 12 and 15 years, to determine the association between carbonated soft drink consumption and bone mineral density in adolescence. This was a cross – sectional observation study in 36 high schools in Northern Island. Usual beverage consumption was assessed by the diet history method. The result of the study showed that higher intake of carbonated soft drinks was significantly associated with lower bone mineral density at the heel, but only in girls. This study also indicated that high consumption of carbonated soft drinks during adolescence might reduce bone mineral density and increase fracture risk.

Marshall TA et al, (2005)., conducted a study in USA to describe association between dental caries and intake of beverages in children subjects (n-642) were in the age group of 4 to 7 years. The subjects with dental caries were identified during dental examination by 2 calibrated Dentist. The result showed that subjects with dental caries had the history of higher intake of sweats like regular soda pop and regular beverage consumption and chocolates.

Wyshak. (2005), a cross sectional study to determine the possible association between carbonated beverage consumption and bone fractures among teenage girls was conducted in U.S.A among 460 adolescence girls. A self- administered questionnaire regarding their personnel and behavioral activities were used as a data collection tool. The result of the study showed that in total sample, carbonated beverage consumption and bone fractures are associated among physically active girls, the cola beverages, in particular are highly associated with bone fractures at ($p=0.002$).

4. STUDIES RELATED TO EFFECTIVENESS OF TEACHING PROGRAMS:

Nobel Mathew (2012) conducted a study to assess the effectiveness of video assisted teaching programme on knowledge and attitude regarding smoking and smokeless tobacco use and its health hazards in Bangalore. 100 girls and boys of school students were used as samples. The data collected were analyzed and interpreted based on descriptive and inferential statistics. In pre-test, 35(70%) boys and 41 (82%) girls had poor knowledge, 15(30%) boys and 9 (18%) girls had average knowledge and none of the sample had good knowledge. Whereas in posttest none of the students had poor knowledge, 13 (26.0%) boys and 22 (44%) girls had average knowledge and 37 (74.0%) boys and 28 (56%) girls have gained good knowledge regarding smoking and smokeless tobacco use and its health hazards. In pre-test, only 23(54%) boys and 11 (22%) girls had positive attitude towards non tobacco use and tobacco control programme and 27(46%) boys and 39 (78%) girls had negative attitude towards non tobacco use and tobacco control programme. But in posttest majority 48 (96%) boys and 50 (100%) girls showed positive attitude towards non tobacco use and tobacco control programme. There was significant difference between mean posttest knowledge score of boys (18.36) and mean pretest knowledge score (7.48). The finding of the present study reveals that there is a significant gain in knowledge and change in attitude among school students following video assisted teaching programme. Therefore such program may be used to promote awareness among school students regarding tobacco use and its ill effects on health.

Uma Maheswari, (2011), conducted a study to evaluates the effectiveness of video teaching program on knowledge and attitude of sexually transmitted infections among female sex workers at Madurai. She adopted experimental design,

Convenience sampling technique to find out the effectiveness of video assisted teaching program, Mean score in post test was higher than pretest knowledge and attitude .It was 61.45 (23.43) and 69.43(47.22) respectively. There was significant difference between pre test and post test knowledge and attitude regarding sexually transmitted infections among female sex workers they were t=42.12and respectively significant at 0.05 level. This showed that the video teaching programme was effective. It was observed that video teaching programme plays a vital role in improving the knowledge and attitude of female sex workers.

Rao DR, et al., (2007) conducted a study at four secondary schools of Hyderabad, India in 164 adolescent girls belonging to eighth grade to assess dietary habits and nutrition knowledge levels of the adolescent girls from different schools and to study the efficacy of two different nutrition educational tools in improving their nutritional knowledge in the classroom setting. In total, two interventions 1. Traditional method using print media such as folders leaflets and charts; 2. VIDEO CD were carried out in a classroom setting for the experimental group. FFQ data on dietary consumption of adolescent girls revealed more consumption of aerated drinks, bakery items, fast foods and less consumption of millets irrespective of their socio-economic conditions. However, consumption of vegetables, green leafy vegetables and fruits was moderate. A significant improvement in the nutrition related knowledge was observed among the experimental group after interventions-1and -2 as compared to the baseline data. However, no significant difference in the improvement of nutritional knowledge levels was observed with the second intervention over the first intervention as already the children in the experimental group gained knowledge through print media. Education on ill effects of aerated drinks, fast foods and the importance of nutrition during the adolescent phase should be emphasized in future programmes.

Daniel (2006)., a study was conducted to evaluate the effectiveness video assisted teaching programme on post natal care of antenatal mothers of specific ethnic group attending a selected hospital in Kerala. A descriptive and evaluative research approach was used with one group pre test and post test design. The sample consisted of 30 antenatal mothers admitted for delivery using purposive sampling technique. A structured interview schedule was developed by the investigator to assess the knowledge of mothers on post natal care. The findings of the study indicated that video assisted teaching programme was effective ($t=30.56$, $p<0.001$) in increasing the knowledge of antenatal mothers on post natal care.

CONCEPTUAL FRAME WORK

A conceptual framework can be defined as a set of concept and assumptions that integrate them into a meaningful configuration **(Polit and Beck 2010).**

A conceptual framework facilitates communication and provides systematic approach to nursing research, educational status, administration and practice.

The Conceptual frame work of the present study was developed by the investigator is based on Nola Pender Health Promotion Model (1997) that is mostly applicable while dealing with fast food hazards and promoting healthy life through videos assisted teaching programme..

Major Concept

A. Person

- Man has the ability to express human health potential and has the capacity for reflective self-awareness , including the assessment of his own competencies.
- The importance of an individual's unique personal factors or characteristics and experiences will depend on the target behavior for health promotion. Personal factors are categorized as biological(age, strength, balance), psychological(self-esteem, self-motivation) and socio cultural (race, ethnicity, education, socioeconomic status)

B. Health

- **Health promotion** is defined as client behavior toward developing well being and actualizing human health potential.

- **Health protection** is client behavior geared toward preventing illness, detecting it early, or maintaining function.

C. Nursing

- The trend toward health promotion has created the opportunity for nurse's to strengthen the profession's influence on health information, disseminate information that promotes an educated public and assist individuals and communities to change long-standing health behaviors.

D. Environment

- Individuals are more apt to perform health promotion behaviors if they are comfortable with the environment versus feeling alienated. Environments that are considered safe as well as interesting facilitate health-promotion behaviors.

Key Concepts

1. Individual Characteristics & Experiences

- Prior related behavior

- Most of the early adolescents has the habit of eating fast food regularly, has less knowledge about the hazards of fast food and unfavorable attitude towards hazards of fast food.

- Personal factors

  Early adolescents get more attraction towards fast food and consume them easily.

2. Behavior Specific Cognitions & Affect

- Perceived benefits of action

In this study the video assisted teaching program regarding hazards of fast food is helping the students to improve their knowledge and attitude of early adolescents.

- Perceived barriers to action
    - Perceived self-efficacy
    - Activity-related affect
    - Interpersonal influences
    - Situational influences

In this study the interpersonal and situational influences act as a perceived barrier to action.

3. Behavioral Outcomes

- Commitment to a plan of action
- Immediate competing demands & preferences
- Health-promoting behavior

After video assisted teaching programme on hazards of fast food most of the early adolescents showed the adequate level of knowledge and favorable attitude which indicates health promoting behavior.

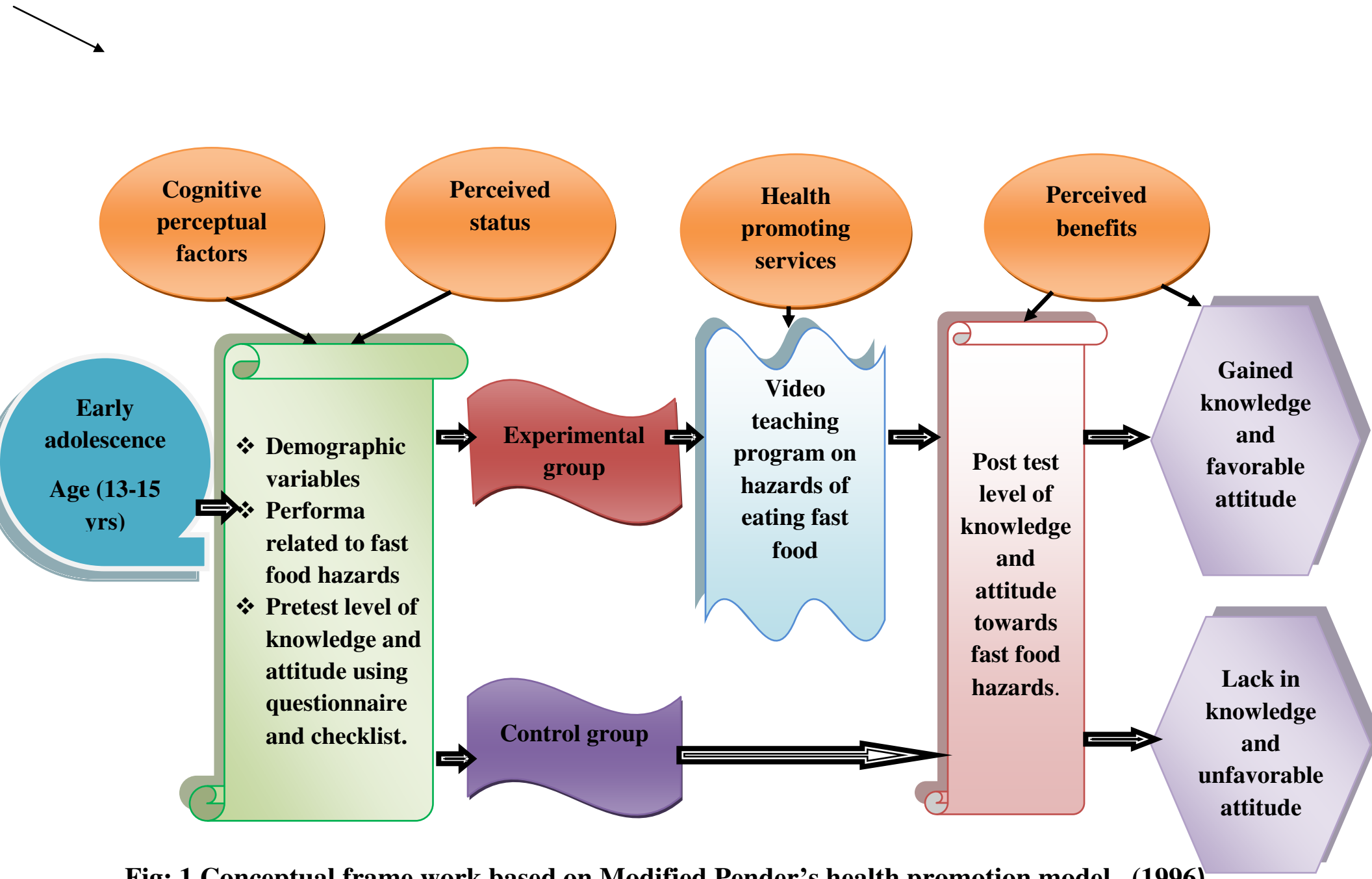

Fig: 1.Conceptual frame work based on Modified Pender's health promotion model (1996)

Summary

This chapter had dealt with the review of research literature related to the problem stated. It has helped the researches to understand the impact of the problem and able to draw the conceptual framework for this study. A number of nutritional education studies suggested that school based educational program might be effective in influencing adolescence to choose a healthier diet. It is thus imperative that intervention in childhood and adolescence is an attempt to prevent or reserve the adverse health effects by fast food consumption. It also enabled the researcher to design the study to develop the tool to plan for data collection procedure and to analyze the data.

CHAPTER - III

RESEARCH METHODOLOGY

The methodology of research indicates the general pattern of organizing, the procedure for gathering valid and reliable data for the problem under investigation. **(Polit and Beck, 2010).**

Methodology is a significant part of any study, which enables the researcher to logically project the research undertaken. Research methodology is the systematic way to carry out an academic study and research in flawless manner.

This chapter deals with the research approach, research design ,variables under the study, setting of the study, population of the study, sample, sample size ,sampling technique, criteria for selection of the sample, description of the interventions, Procedure for data collection, method of data analysis and the report of pilot study.

RESEARCH APPROACH:

The investigator adopted a quantitative evaluative approach because the aim of the investigator was to determine the effectiveness of video assisted teaching programme on fast food hazards among early adolescents.

RESEARCH DESIGN:

True experimental research is the most powerful method for testing hypothesis of cause and effect relationships between variables. It includes randomization, control and manipulation. (Polit andBeck, 2010)

A true experimental design, with pre test and post test control group design can be adopted to find out the effectiveness of video assisted teaching programme regarding hazards of fast food on early adolescents by using stratified random sampling technique.

The design can be represented as:

Group	pretest	Manipulation	Posttest
E- R	O_1	X	O_2
C- R	O_1		O_2

Key:

E-experimental group

C-control group

R-randomization

O_1- pre test on knowledge and attitude

X -video assisted teaching programme on hazards of eating fast food

O_2-post test on knowledge and attitude

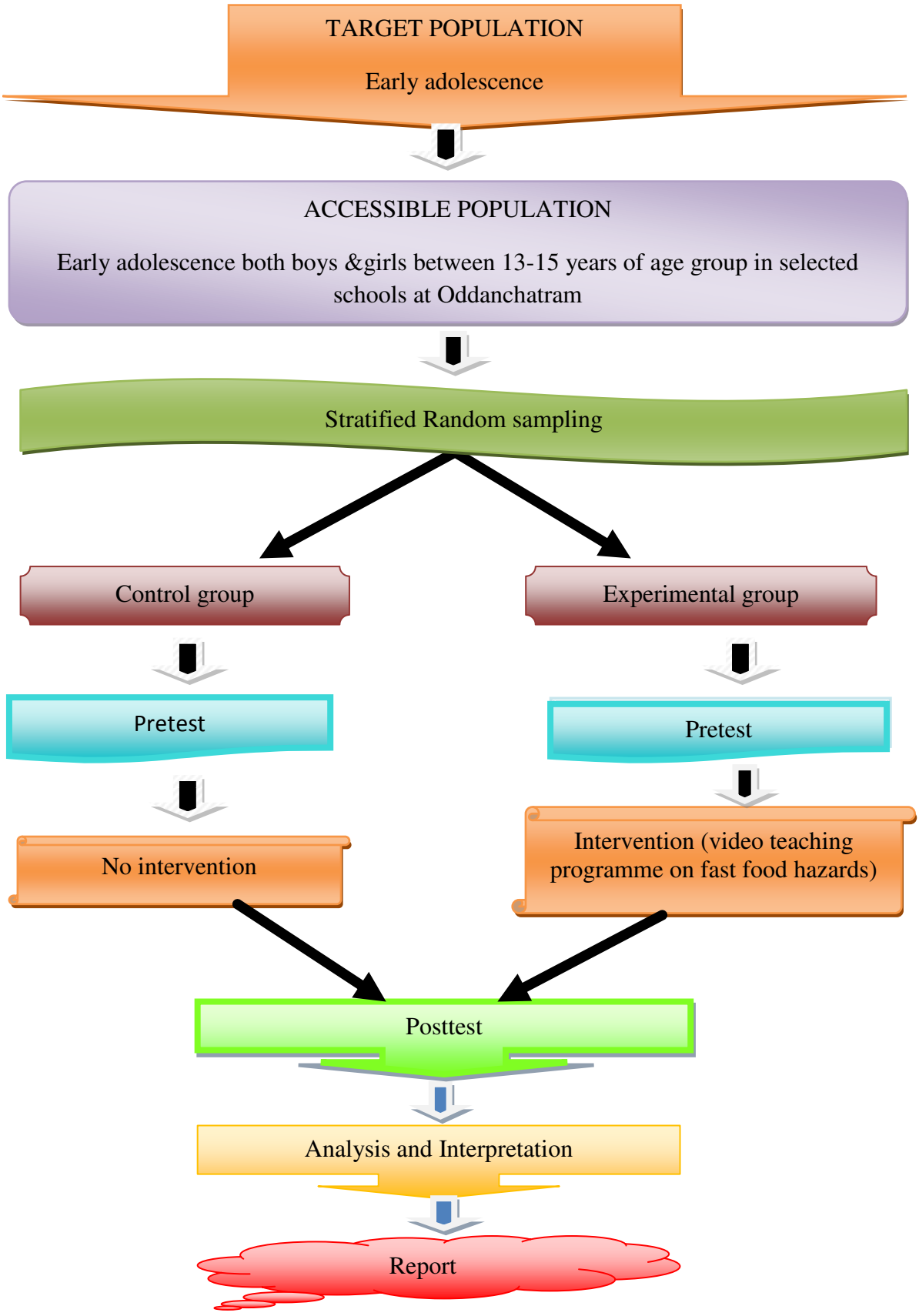

FIG : 2 SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

RESEARCH VARIABLES

Dependent variables:

Knowledge and attitude of early adolescence towards the hazards of eating fast food.

Independent variables:

Video assisted teaching programme on hazards of eating fast food.

SETTING OF THE STUDY

Setting is the general location and condition in which data collection takes place for the study (Polit, D.F and Beck, 2010)

The samples for the experimental group were selected from the Christian Matriculation Higher Secondary School and the samples for the control group were selected from Holy Cross Matriculation Higher Secondary School, Oddanchatram, Dindigul which is 10 and 11 km away respectively from the College of Nursing.

The total students strength in Christian Matriculation Higher Secondary School is about 1500.in that the total 8^{th} standard students are 122 and 9^{th} standard students 128.

The total students strength in Holy Cross Matriculation Higher Secondary School is about 1100, in that the total 8^{th} standard students are 88 and 9^{th} standard students are 64.

POPULATION

A population is the entire aggregation of cases that meet a designated set of criteria. (Polit, D.F, and Beck, 2010).

Target population.

In this study the target population comprises of all early adolescence age group between 13 and 15 years.

Accessible population

In this study the accessible population comprises of early adolescence age group between 13 and 15 years from selected schools at Oddanchatram.

SAMPLE

Early adolescence age group between 13and 15 years from selected schools at Oddanchatram, who fulfill the inclusion criteria, will be selected to participate in this study.

SAMPLE SIZE

In this study the sample size is about 80 early adolescence, in the age group between 13and 15 years from selected schools at Oddanchatram. In that 40 students in control group and 40 students in experimental group.

SAMPLING TECHNIQUES

Stratified random sampling method was used to select early adolescence from selected schools at Oddanchatram. Students were separated into two striate as eighth standard 20 students and ninth standard 20 students in both experimental and control group, a total of 80 samples.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria

The study includes students

- Both sexes from 13 and 15 years of age group.
- Studying in selected schools at Oddanchtram.
- Who are willing to participate in this study.
- Who are available on the day of data collection.
- Who knows Tamil

Exclusion criteria

The study excluded students

- Below 13& above15 years of age group.
- Who are not willing to participate to this study.
- Who are not available on the day of data collection.
- Studying in other than selected schools.

DESCRIPTION OF THE INSTRUMENT

The instrument consists of four parts

- Part-1: Demographic data.
- Part -2 Performa related to fast food
- Part-3: Structured knowledge questionnaire on fast food hazards
- Part-4: Checklist to assess the attitude regarding fast food hazards.

PART-1

Demographic Variables

- Demographic variables include Age, Sex, Educational status, No of siblings, Father's education, Mother's education, and Mother's occupation, Area of residence, Family income and Dietary pattern.

PART-2

Performa related to fast food

- It consists of 10 base line questions regarding fast food usage

PART -3

Self administered structured questionnaire

It consists of 25 items to assess the knowledge related to hazards of fast food usage. It is based on,

- Introduction of fast food hazards,
- Types and ingredients of fast food,
- Hazards of fast food,
- Prevention of fast food hazards.

Scoring Procedure

Each item was a multiple choice question with 1 correct answer and 3 distracters. A score of '1' was given for the right answer and '0' for wrong answer.

0 - 50% inadequate knowledge

51 - 75% moderate knowledge

76 - 100% adequate knowledge

PART-4

Check list to assess the attitude regarding hazards of fast food

This scale is used to assess the attitude regarding hazards of fast food among early adolescence. It comprises of 10 questions with positive and negative statement regarding fast food and its hazards. The students are requested to answer these questions as true or false. Each correct answer carries the score of '1' and wrong answer carries '0' mark.

Scoring Procedure

Positive attitude - 71 -100%

Neutral attitude -51 - 70%

Negative attitude - 0 - 50%

INTERVENTION

The investigator made video programme with review of literature and with the expert's opinion. The content of video assisted teaching programme towards the hazards of fast food usage. It includes introduction of fast food, types, ingredients, hazards of fast food usage, and prevention of fast food hazards. The time taken for the programme was around 30 minutes.

ETHICAL CONSIDERATIONS

Institutional Human Ethical Committee clearance was obtained. Permission was obtained to conduct the study in the selected high Schools at Oddanchatram. Written consent was obtained from the principals' of selected schools before starting the study. Participants were informed about the study and informed consent was obtained from the individual participants. The participants were told that they were under the obligation to participate in this study.

VALIDITY

The tool was validated by 5 nursing experts, one medical officer and one statistics expert. The experts were requested to check the relevance, sequence and adequacy of the items in the research tool. Based on their valid suggestion a few items were modified and final tool was prepared as per the suggestions given by the experts.

RELIABILITY

The reliability of the tool was assessed using test-retest method and the 'r' value was computed. The knowledge questionnaire is reliable at r = 0. 9 and attitude at r=0.8.The tool was found to be highly reliable to conduct the study.

PILOT STUDY

Pilot study was conducted to find out the reliability of the tool and feasibility of conducting the study. Study was conducted for a period of one week from 21.7.14 to 28.7.13 at R.C. Loyalo high school and C.S.I .high school, at Oddanchatram. Study was conducted with 8 samples. The sample who met inclusion and exclusion criteria was selected by using Stratified Random sampling technique. Informed consent was obtained from each student. The administration of the tool and intervention through video assisted teaching programme were implemented. The video was run around 30 minutes. Practicability of the tool was checked to conduct the main study.

DATA COLLECTION PROCEDURE

The main study was conducted in the month of August 2014 in Christian Matriculation Higher secondary School and Holy Cross Matriculation Higher Secondary School at Oddanchatram. About 80 students, who met with inclusion and

exclusion criteria, were selected by using stratified Random sampling technique. Informed consent was obtained from each participant. The investigator established good rapport with students through an informative talk about the purpose of the study to the students to ensure their cooperation.

The each sample's height and weight were checked and BMI was calculated.

The data collection procedure was held in control group by two phases. In the first phase-demographic variables, proforma related to fast food, knowledge and attitude towards the hazards of fast food was assessed. During the second phase, post test was conducted to the same group with same tool after one week.

The data collection procedure was held by three phases for experimental group. In the first phase-demographic variables, proforma related to fast food knowledge and attitude on fast food hazards was assessed, during the second phase, the video assisted teaching programme was administered among early adolescence.

The video assisted teaching programme was run around 30 minutes. At the end of the programme, content of the programme was discussed among the group for another 15 minutes. In the third phase, post test was administered to the same group with same tool after one week of video assisted teaching programme.

All the subjects were very much cooperative& investigator expressed her attitude for their cooperation.

PLAN FOR DATA ANALYSIS

The data was analyzed in terms of the objectives of the study using descriptive and inferential statistics. The plan of data analysis was follows.

- Organize the data in a master data sheet.
- Frequency and percentage distribution were used to analyze the demographic variable and proforma related to fast food for early adolescents .
- Frequency and percentage distribution were used to assess the level of knowledge and attitude of early adolescents.
- Mean, percentage, standard deviation, paired and unpaired‘t’ were used to assess and compare the pretest and posttest knowledge and attitude.
- Karl Pearson correlation coefficient was used to analyze correlation between knowledge and attitude of early adolescents.
- Chi square test also were used to analyze association of demographic variables with knowledge and attitude.

Summary

This chapter dealt with research approach, research design, settings, population, sampling, sampling technique, sampling criteria, selection and development of study instruments, data collection procedure and plan for data analysis.

CHAPTER-IV

ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data collection, it includes both descriptive and inferential statistics. Statistics is a field of study concerned with techniques or methods of data, classification, summarizing, interpretation drawing inferences, testing of hypothesis, making recommendations etc. (Mahajan,2004)

The data was collected from 80 early adolescence studying 8^{th} and 9^{th} std between the age group of 13 and 15 years among them 40 students were in control group, 40 students were in experimental group. This was done to determine the effectiveness of video assisted teaching programme on knowledge and attitude towards the hazards of fast food. The data were analyzed according the objectives and hypothesis of the study. Data analysis was computed after all the data was transferred to the master data coding sheet. The researcher used the descriptive and inferential statistics for data analysis.

The data was analyzed tabulated and interpreted using descriptive and inferential statistics in the sequence as follows.

Organization of findings

The analyzes of the data were organized under following headings

- Frequency and percentage distribution of demographic variables of early adolescence
- Frequency and percentage distribution of proforma related to fast food usage of early adolescence

- Frequency and percentage distribution of level of knowledge on hazards of fast food among early adolescence
- Frequency and percentage distribution of level of attitude on hazards fast food among early adolescence
- Comparison of level of knowledge before and after video assisted teaching programme in control and experimental groups through paired 't' test.
- Comparison of attitude before and after video assisted teaching programme in control and experimental groups of early adolescence through paired 't' test.
- Comparison of level of post test knowledge for control and experimental groups through unpaired 't' test
- Comparison of level of post test attitude for control and experimental groups through unpaired 't' test
- Correlation between level of knowledge and attitude on hazards of fast food among early adolescence in control and experimental groups.
- Association between selected demographic variables and level of knowledge of early adolescence in control group.
- Association between proforma related to fast food usage and level of knowledge of early adolescence in control group.
- Association between selected demographic variables and level of knowledge of early adolescence in experimental group.
- Association between proforma related to fast food usage and level of knowledge of early adolescence in experimental group.

- Association between selected demographic variables and attitude of early adolescence in control group.
- Association between proforma related to fast food usage and level of attitude of early adolescence in control group.
- Association between selected demographic variables and attitude of early adolescence in experimental group.
- Association between proforma related to fast food usage and level of attitude of early adolescence in experimental group.

Table-1: Frequency and percentage distribution of demographic variables of early adolescence.

(N=80)

Sample characteristics	Experimental group (n=40)		Control group (n=40)	
Demographic Variables	**f**	**%**	**f**	**%**
Age				
a. 13 years	21	52.5	14	35
b. 14 years	19	47.5	26	65
Educational status				
a. 8th standard	20	50	20	50
b. 9th standard	20	50	20	50
Number of siblings				
a. <1	33	82.5	31	77.5
b. 2-3	7	17.5	8	20.5
c. >3	0	0	1	2.5
Fathers education				
a. Non formal education	5	12.5	6	15
b. Schooling	24	60	24	60
c. Graduates	6	15	7	17.5
d. Post graduates	5	12.5	3	7.5
Mothers education				
a. Non formal education	2	5	5	12.5
b. Schooling	26	65	26	65.5
c.Graduates	3	7.5	5	12.5
d.Post graduates	9	22.5	3	7.5
e.Professionals	0	0	1	2.5
Family income (Rs. per month)				
a. <1000	10	25	5	12.5
b. 1001-5000	14	35	15	37.5
c. 5001-10000	8	20	11	27.5
d. >100000	8	20	9	22.5

Area of residence				
a. Urban	18	45	20	50
b. Rural	22	55	20	50
Dietary pattern				
a. Vegetarian	3	7.5	11	27.5
b. Non vegetarian	33	82.5	28	70.0
c. Eggetarian	4	10.0	1	2.0

The table -1 revealed that, most of the early adolescents were in the age group of 13 years(52.5%), male (52.5%), father and mother educated up to schooling (60%,65%), residing in rural area (55%) and non vegetarian (82.5%). Few of them had their monthly family income between 1001-5000(35%) in control group.

In experimental group most of the early adolescents were aged 14 years (65%), female (65%) father and mother educated up to schooling (60%, 65.5%). Equal numbers of students were from urban and rural area (50%). Few of them had their monthly family income between1001-5000(37.5%).

Figure 3 Showed that their percentage distribution of male (27.5%), female (7.5%) in experimental group and male (47.5%), female(52.5%) in control group.

Figure 4 Showed that most of the students had working mother in control group (65%), but in experimental group, most of the students mothers were not working (52.5%).

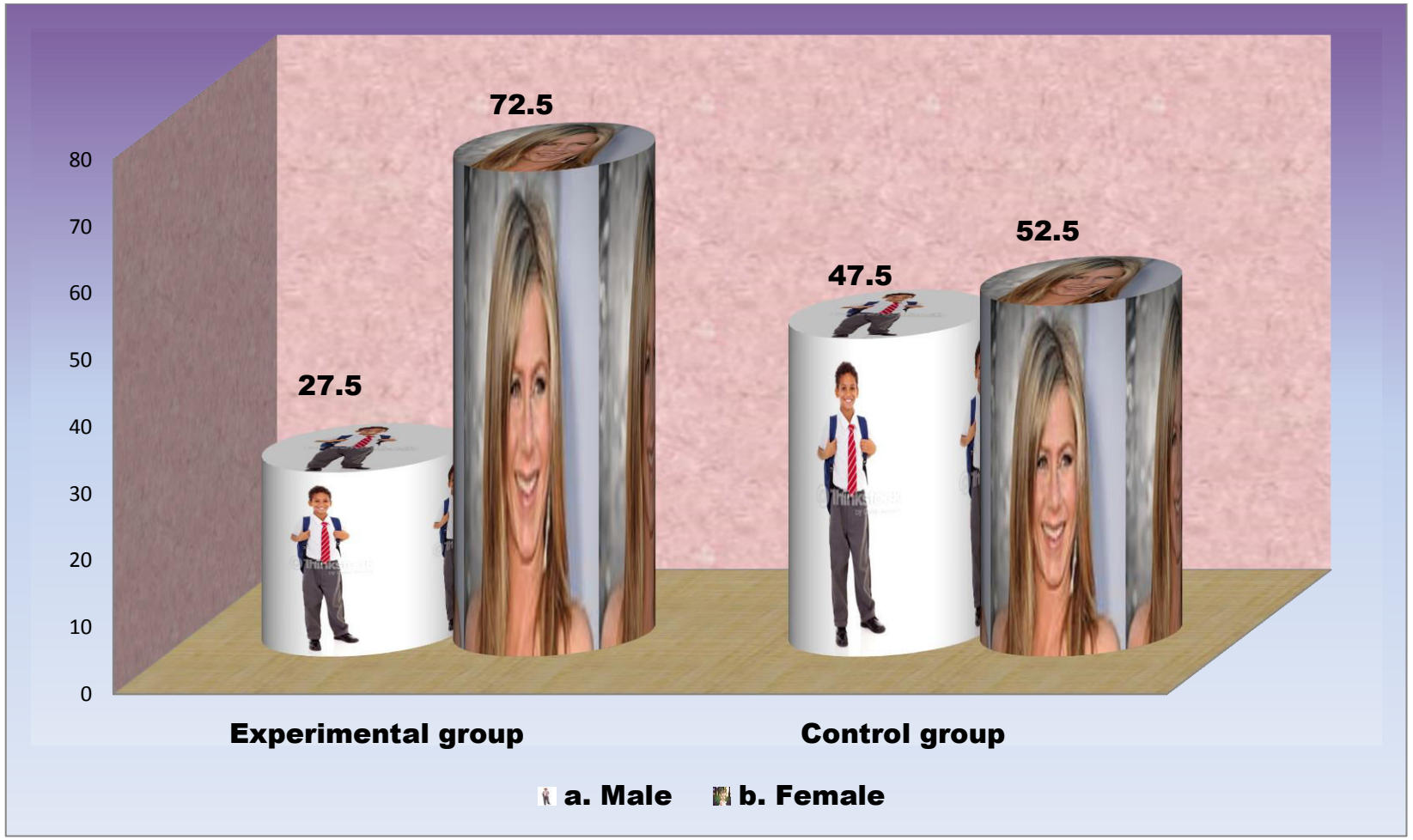

Figure 3: Percentage distribution of the sex of early adolescents

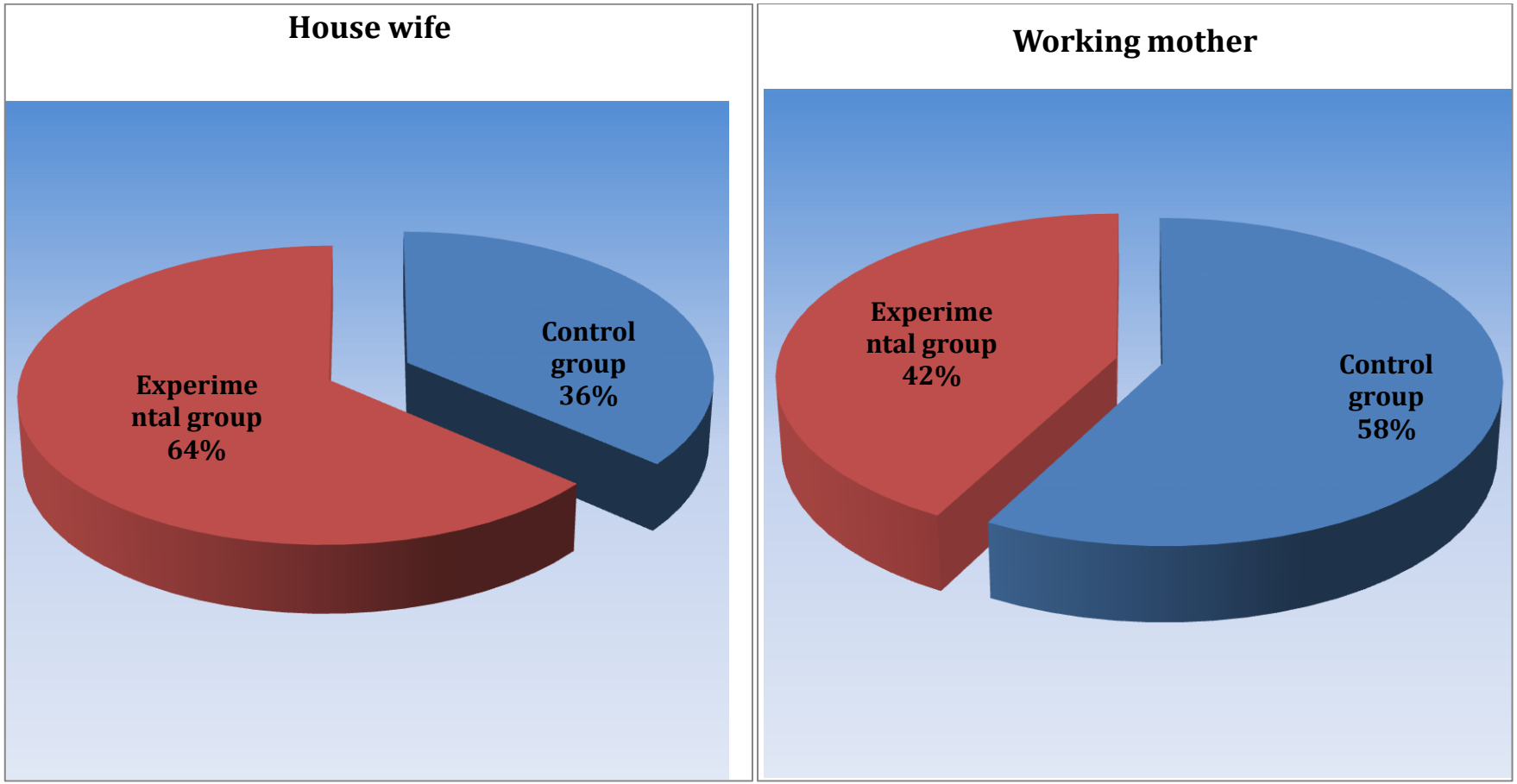

Figure 4: Percentage distribution of mother's occupation of the early adolescents. .

Table-2: Frequency and percentage distribution proforma related to fast food usage of early adolescence (N=80)

Sample characteristics	Control group (n=40)		Experimental group (n=40)	
Proforma related to fast food usage	**f**	**%**	**f**	**%**
Height				
a. <140 cm	11	27.5	6	15.0
b. 140-160 cm	27	67.5	33	82.5
c. >160 cm	2	5.0	1	2.5
Weight				
a. <35 kg	13	32.5	15	37.5
b. 36-65 kg	27	67.5	25	62.5
c. >65 kg	0	5.0	0	0
Type of snacks often takes to school				
a. Fruits and vegetables	18	45	27	67.5
b. Lays, curcure etc	8	20	3	7.5
c. Biscuits	10	25	8	20
d. Sweats	4	10	5	5.0
If the habit of fast food is yes,				
a. While watching TV	16	40.0	23	57.5
b. In theatre	0	0	3	7.5
c. While shopping	1	2.5	3	7.5
d. Tournament	4	10	2	5.0
e .During break time	8	20	3	7.5
Frequency of Consumption				
a. Never	10	25.0	16	40.0
b. 1-3 times per week	17	42.5	22	55
c.3-4 times per week	4	10	1	2.5
d. Daily	9	22.5	1	2.5
Pocket money (rupees per week)				
a. Nil	27	67.5	22	55
b. <50	10	25	10	25
c. >50	3	7.5	8	20

Source of information				
a. Teachers	13	32.5	15	37.5
b. Mass media	5	12.5	5	12.5
c. Family members	12	30	5	12.5
d. Friends	9	22.5	11	27.5
e. Health professionals	1	2.5	4	10
Type of fast food eating regularly	11	27.5	14	35
a. No	3	7.5	0	0
b. Soft drinks	12	30	13	32.5
c. Crispy items				
d. Noodles, fried rice, puffs, panipoori etc…	14	35	11	27.5
e. Fried meat (chicken 65, chilli chicken)	-	-	2	0.5

Table 2 revealed that most of the early adolescents had height between 140 and 160cm (67.5%, 82.5%), weight between 36 and 65kg (67.5%, 62.5%) and not received pocket money(67.5%,55%). Very few of them used to bring sweats to school as a snacks(10%,5%), and consume fast food usually while going for shopping(2.5%,7.5%) for about 3-4 times per week(10%,2.5%) and drink soft drinks (7.5%) regularly, and theirsourse of information was health professionals(2.5%,10%) in control and experimental group respectively.

Figure 5 Represents that majority of the early adolescents had BMI less than 20(67.5%, 75%) and very few had BMI more than 25 (5%, 2.5%) in control and experimental group .

Figure 6 Showed that most of the early adolescents had the habit of fast food consumption during recreation (62%,72%) in control and experimental group

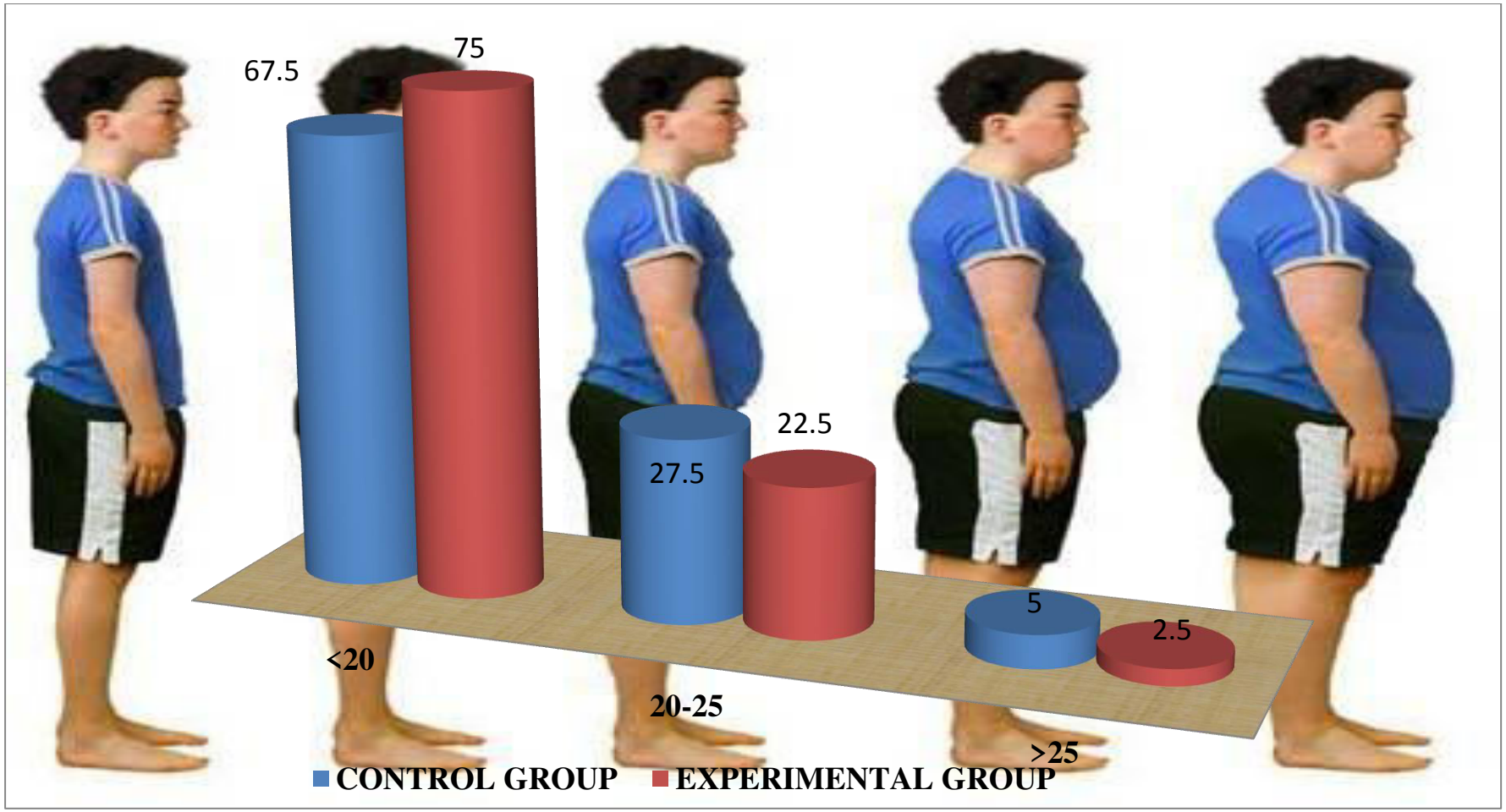

Figure 5: Percentage distribution of BMI of early adolescents

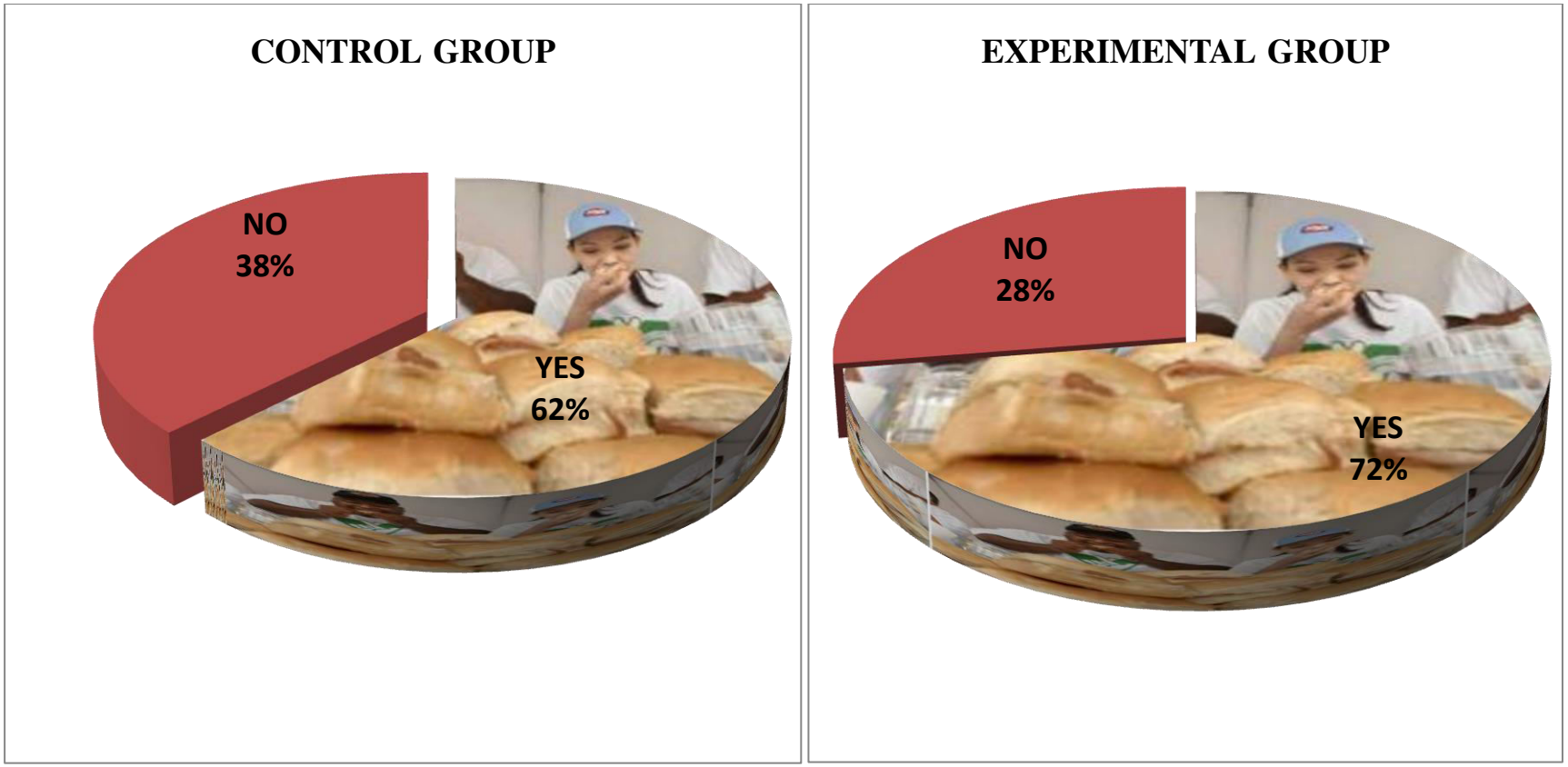

Figure 6: Percentage distribution of habit of fast food consumption during recreation.

Table-3: Frequency and percentage distribution of pretest and posttest level of knowledge towards the hazards of fast food among early adolescents

(N=80)

Level of Knowledge	Control Group				Experimental Group			
	Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%
Inadequate	33	82.5	33	82.5	30	75	2	5
Moderate	7	17.5	7	17.5	10	25	15	37.5
Adequate	-	-	-	-	-	-	23	57.5

The above table-3 revealed that, majority of the students in control group (82.5%) had inadequate knowledge; and few of them (17.5%) had moderate knowledge about hazards of fast food in pre test and post test whereas in experimental group most of the students (75%) had inadequate knowledge in the pre test, and in the post test very few students (5%) had inadequate knowledge. This indicates video assisted teaching programme on hazards of fast food was very effective in improving the knowledge of students.

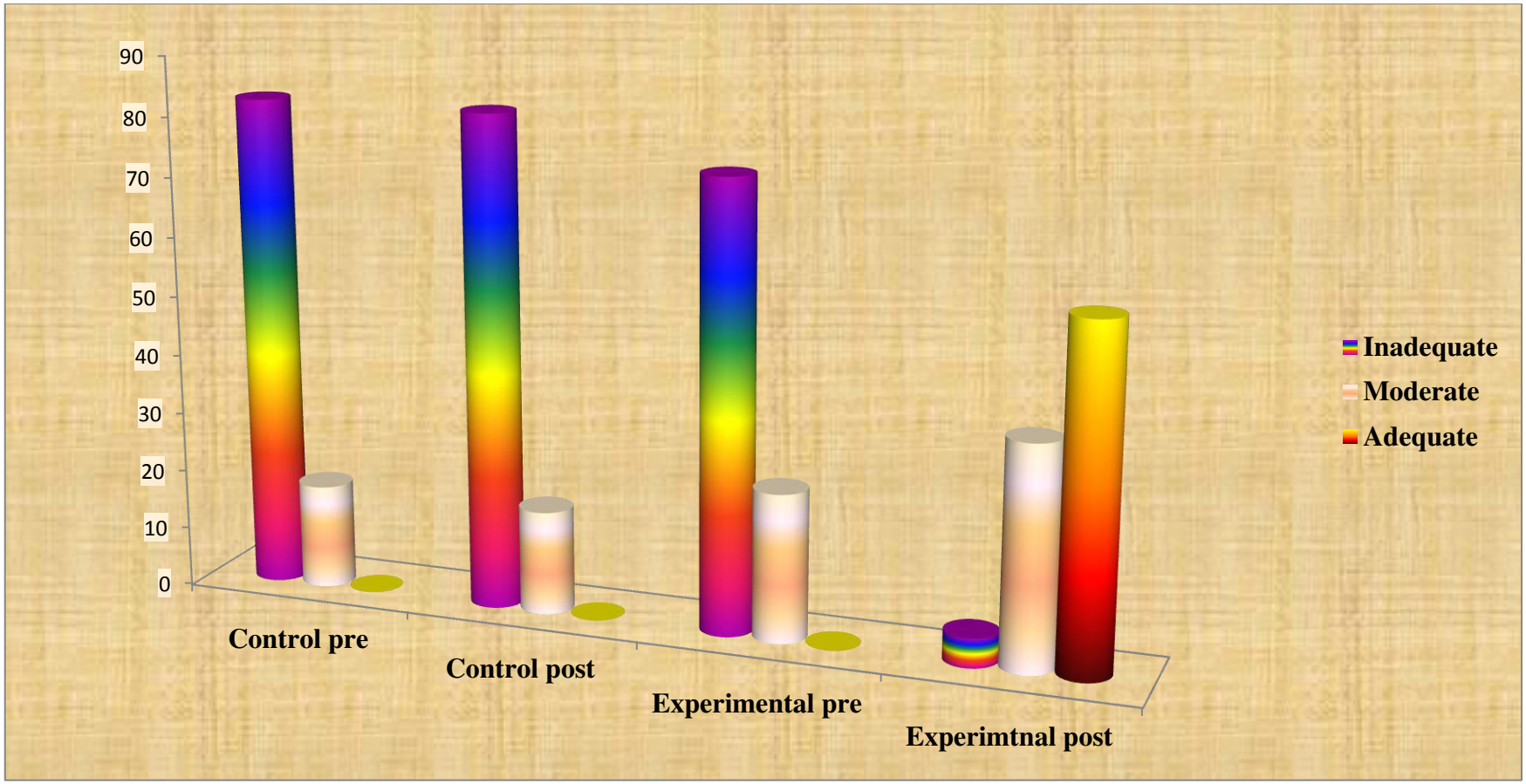

Figure 7: Percentage distribution of level of pretest and posttest level of knowledge towards the hazards of fast food among early adolescents.

Table-4: Frequency and percentage distribution of pretest and posttest level of attitude on hazards of fast food among early adolescents.

(N=80)

Level of attitude	Control group				Experimental group			
	Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%
Favorable	27	67.5	26	65	32	80	38	95.5
Moderately favorable	11	27.5	12	30	6	15	9	5
Unfavorable	2	5	2	5	2	5	0	0

The above table-4 showed that majority of the students in control group had favorable attitude (67.5, 65%) and very few had unfavorable attitude (5% ,5%) in pre test and post test whereas in experimental group majority students had favorable attitude (80%) and very few had moderately favorable attitude (5%) in pre test. After the video assisted teaching programme on fast food hazards almost all the students (95.5%) except few developed favorable attitude towards the hazards of fast food in experimental group.

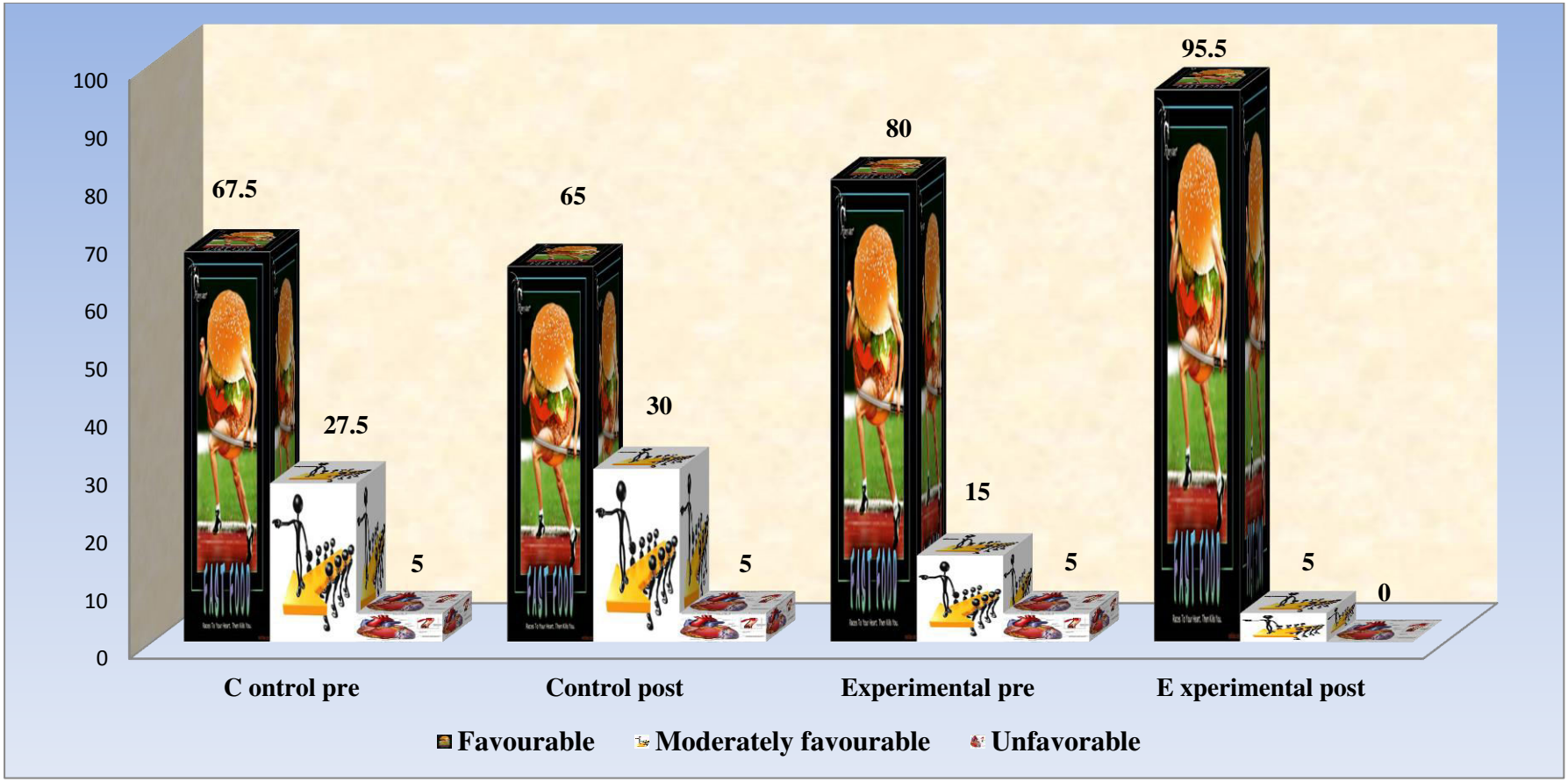

Figure 8: Percentage distribution of pretest and posttest level of attitude on hazards of fast food among early adolescents

Table-5: Comparison of level of knowledge before and after video assisted teaching programme on hazards of fast food in control and experimental groups through paired 't' test.

(N=80)

Group	n	pre test		post test		Mean difference	't'-value
		Mean	SD	Mean	SD		
Control Group	40	10.05	2.54	10.2	2.48	0.15	6.32**
Experimental group	40	10.1	2.52	18.13	2.95	8.03	13.65**

**P<0.001.

The above table revealed that the mean value in pre test score was M=10.05, M= 10.1 in control and experimental group and the standard deviation was SD=2.54, SD= 2.52 1 in control and experimental group. But in post test the mean and standard deviation (M=18.13, SD=2.95) were increased in experimental group than the control group. The obtained 't'(13.65) value was found to be significant. It was inferred that the early adolescents who exposed to the video assisted programme had significant increase in level of knowledge and it was statistically significant at p<0.001. Hence H_1 is accepted.

Table-6: Comparison of level of attitude before and after video assisted teaching programme on hazards of fast food in control and experimental group through paired 't' test

(N=80)

Group	n	pre test		post test		Mean difference	't'-value
		Mean	SD	Mean	SD		
Control Group	40	7.85	1.6	7.8	1.4	0.05	6.32**
Experimental group	40	7.5	1.75	8.4	1.15	6.35	13.65**

** P<0.00

The above table revealed that the mean M=7.85, M=7.8 and standard deviation SD=1.6, SD=1.4 in control group during pre and post test. Where as in experimental group the post test mean (M=8.4) and standard deviation (SD=1.15) are significantly increased. Obtained 't' value was found to be significant. It was inferred that the early adolescents who exposed to the video assisted teaching programme had significant increase in level of attitude and it was statistically significant at p<0.001. Thus research hypothesis H_1 is accepted.

Table-7: Comparison of post test level of knowledge by control and experimental group among early adolescents using Unpaired 't' test

(N=80)

Group	N	Mean	SD	Mean difference	't'-value
Control Group	40	7.8	1.4		
Experimental group	40	8.4	1.15	0.6	13.14***

***P<0. 001

The result revealed that, obtained 't' value was found to be statistically significant at P<0.001 in post test level of knowledge between control and experimental group. This showed that the video assisted teaching programme was very effective in improving the level of knowledge regarding hazards of fast food among early adolescents. Hence research hypothesis H_2 was accepted.

Table-8: Comparison of post test level of attitude by control and experimental groups among early adolescents using Unpaired 't' test

(N=80)

Group	N	Mean	SD	Mean difference	't'-value
Control Group	40	7.8	1.4	0.6	2. 0945*
Experimental group	40	8.4	1.15		

*P<0. 05 significant

The result revealed that, obtained't' value found to be statistically significant at P<0. 05 in post test level of attitude in control and experimental group of early adolescents. This showed that the video assisted teaching programme was effective in improving the level of attitude regarding hazards of fast food among early adolescents. Hence research hypothesis H_2 was accepted.

Table 9: Correlation between level of knowledge and attitude on hazards of fast food among early adolescents in control and experimental group.

(N=80)

Group	"r"-value
Control	
Pre-Knowledge and attitude	0.2640
Post -Knowledge and attitude	0.0015
Experimental	
Pre-Knowledge and attitude	0.0465
Post -Knowledge and attitude	2.20311***

***P<0.001

The above table revealed that, there was a correlation (r=0.414) between posttest level of knowledge and level of attitude in experimental group. It was inferred that there was a positive correlation between posttest knowledge and attitude towards the hazards of fast food in experimental group. Thus research hypothesis H_3 was partially accepted.

Table-10: Association between selected demographic variables and pre test level of knowledge of early adolescents in control group

(N=40)

Sample characteristics	Moderate knowledge		Inadequate knowledge		
Demographic Variables	**f**	**%**	**f**	**%**	**χ2**
1.Age					
a. 13 years	24	60	17	42.5	0.835
b. 14 years	6	47.5	13	32.5	
2. Sex					
a. Male	4	52.5	7	17.5	1.045
b. Female	6	47.5	23	57.5	
3.Educational status					
a.8th std	20	50	20	50	2.133
b.9th std	20	50	20	50	
4.Number of siblings					
a.<1	33	82.5	31	77.5	0.058
b.2-3	7	17.5	8	20.5	
c.>3	0	0	1	2.5	
5.Fathers education					
a. Non formal education	5	12.5	6	15	
b. Schooling	24	60	24	60	
c. Graduates	6	15	7	17.5	3.022
d. Post graduates	5	12.5	3	7.5	

5.Mothers education					
a. Non formal education	2	5	5	12.5	
b. Schooling	26	65	26	65.5	1.755
c. Graduates	3	7.5	5	12.5	
d. Post graduates	9	22.5	3	7.5	
e. Professionals	0	0	1	2.5	
7.Mothers occupation					
a. House wife	12	30	21	52.5	1.573
b. Working mother	26	65	19	47.5	
8. Family income (Rs. per month)					
a. <1000	10	25	5	12.5	
b. 1001-5000	14	35	15	37.5	1.657
c. 5001-10000	8	20	11	27.5	
d. >100000	8	20	9	22.5	
9. Area of residence					
a. Urban	18	45	20	50	0.135
b. Rural	22	55	20	50	
10. Dietary pattern					
a. Vegetarian	3	7.5	11	27.5	0.121
b. Non vegetarian	33	82.5	28	70.0	
c. Eggetarian	4	10.0	1	2.0	

The above table-10 showed that, there was no significant association between knowledge of early adolescents and demographic variables in control group. Hence the research hypothesis H_4 was rejected.

Table-11: Association between proforma related to fast food and level of knowledge of early adolescents in control group

(N=40)

Sample characteristics	Moderate knowledge		Inadequate knowledge		χ^2
Proforma related to fast food usage	**f**	**%**	**f**	**%**	
1.Height					
a. <140 cm	0	0	6	15	
b. 140-160 cm	10	25	23	57.5	2.828
c. >160 cm	0	0	1	2.5	
2. Weight					
a. <35 kg	3	7.5	12	30	0.320
b. 36-65 kg	7	17.5	18	45	
c. >65 kg	0	0	0	0	
3.BMI					
a. <20	6	15	24	60	
b.20-25	4	10	5	12.5	2.548
c.>25	0	0	1	2.5	
4.Type of snacks often takes to school					
a. Fruits and vegetables	5	12.5	22	55	
b. Lays, curcure etc	1	2.5	2	5	
c. Biscuits	4	10	4	10	4. 049
d. Sweats	0	0	2	5	
5.Habit of fast food consumption during recreation					
a. Yes	3	7.5	26	65	12.79*
b. No	7	17.5	4	10	

6. If yes,					
a. While watching TV	3	7.5	17	42.5	
b. In theatre	6	15	2	5	4.792
c. While shopping	1	2.5	3	7.5	
d. Tournaments	0	0	2	2.5	
e .During break time	0	0	3	5	
7.Frequency of Consumption					
a. Never	8	20	8	20	
b. 1-3 times per week	2	5	20	50	8.970
c.3-4 times per week	0	0	1	2.5	
d. Daily	0	0	1	2.5	
8. Pocket money (Rs/week)					
a. Nil	5	12.5	16	40	3.530
b. <50	2	5	8	20	
c. >50	3	7.5	6	15	
9. Source of information					
a. Teachers	4	10	11	27.5	
b. Mass media	2	5	3	7.5	
c. Family members	2	5	3	7.5	2.707
d. Friends	1	2.5	10	25	
e. Health professionals	1	2.5	3	7.5	
10. Type of fast food eating regularly					
a. No	5	12.5	9	22.5	
b.Soft drinks	0	0	0	0	
c. Crispy items	2	5	11	27.5	2.438
d. Noodles, fried rice, puffs, panipoori etc…	2	5	9	22.5	
e. Fried meat (chicken 65, chilli chicken)	1	2.5	1	2.5	

*P<0.05 significant.

The above table-11 showed that, there was significant association between level of knowledge of early adolescents and habit of taking fast food in control group. Hence the research hypothesisH_5 was partially accepted.

Table-12: Association between selected demographic variables and pre test level of knowledge of early adolescents in experimental group

(N=40)

Sample characteristics	Moderate knowledge		Inadequate knowledge		χ^2
Demographic Variables	**f**	**%**	**f**	**%**	
1.Age					
a. 13 years	4	10	17	2.5	0.835
b. 14 years	6	15	13	32.5	
2. Sex					
a. Male	4	52.5	7	17.5	1.045
b.Female	6	47.5	23	57.5	
3.Educational status					
a.8th std	3	7.5	17	42.5	2.133
b.9th std	7	17.5	13	32.5	
4.Number of siblings					
a.<1	8	20	25	62.5	0.58
b.2-3	2	5	5	12.5	
5.Fathers education					
a. Non formal education	1	2.5	4	10	
b. Schooling	8	20	16	40	
c. Graduates	0	0	6	15	3.022
d. Post graduates	1	2.5	4	10	
5.Mothers education					
a. Non formal education	2	5	5	12.5	
b. Schooling	26	65	26	65.5	1.755
c. Graduates	3	7.5	5	12.5	
d. Post graduates	9	22.5	3	7.5	
e. Professionals	0	0	1	2.5	

7.Mothers occupation					
a. House wife	2	5	10	25	1.573
b. Working mother	8	20	20	50	
8. Family income (Rs. Per month)	2	5	8	20	
a. <1000	5	12.5	9	22.5	1.657
b. 1001-5000	1	2.5	7	17.5	
c. 5001-10000	2	5	6	15	
d. >100000					
9. Area of residence					
a. Urban	4	10	14	35	0.135
b. Rural	6	15	16	40	
10. Dietary pattern					
a. Vegetarian	1	2.5	2	5	
b. Non vegetarian	8	20	25	62.5	0.121
c. Eggetarian	1	2.5	3	7.5	

The above table-12 showed that, there was no significant association between pre test level of knowledge and demographic variables in experimental group. Hence the research hypothesis H_4 was rejected.

Table-13: Association between proforma related to fast food and pre test level of knowledge of early adolescents in experimental group (N=40)

Sample characteristics	Moderately adequate knowledge		Inadequate knowledge		χ^2
Proforma related to fast food usage	**f**	**%**	**f**	**%**	
1.Height					
a. <140 cm	0	0	6	15	
b. 140-160 cm	10	25	23	57.5	2.828
c. >160 cm	0	0	1	2.5	
2. Weight					
a. <35 kg	3	7.5	12	30	0.320
b. 36-65 kg	7	17.5	18	45	
3.BMI					
a. <20	6	15	24	60	2.548
b.20-25	4	10	5	12.5	
c.>25	0	0	1	2.5	
4.Type of snacks often takes to school					
a. Fruits and vegetables	5	12.5	22	55	
b. Lays, curcure etc	1	2.5	2	5	4. 049
c. Biscuits	4	10	4	10	
d. Sweats	5	0	2	5	
5.Habit of fast food consumption during recreation					
a. Yes	3	7.5	26	65	12.79*
b. No	7	17.5	4	10	
6. If yes,					
a. While watching TV	3	7.5	17	42.5	
b. In theatre	6	15	2	5	4.792
c. While shopping	1	2.5	3	7.5	
d. Tournaments	0	0	2	2.5	
e .During break time	0	0	3	5	

7.Frequency of Consumption					
a. Never	8	20	8	20	
b. 1-3 times per week	2	5	20	50	8.970
c.3-4 times per week	0	0	1	2.5	
d. Daily	0	0	1	2.5	
8. pocket money (rupees per week)					
a. Nil	5	12.5	16	40	3.530
b. <50	2	5	8	20	
c. >50	3	7.5	6	15	
9. Source of information					
a. Teachers	4	10	11	27.5	
b. Mass media	2	5	3	7.5	2.707
c. Family members	2	5	3	7.5	
d. Friends	1	2.5	10	25	
e. Health professionals	1	2.5	3	7.5	
10. Type of fast food eating regularly					
a. No	5	12.5	9	22.5	
b.Soft drinks	0	0	0	0	
c. Crispy items	2	5	11	27.5	2.438
d. Noodles, fried rice, puffs, panipoori etc…	2	5	9	22.5	
e. Fried meat (chicken 65, chilli chicken)	1	2.5	1	2.5	

*P<0.05 significant.

The above table 13 showed that, there was significant association between level of knowledge of early adolescent and the habit of taking fast food in control group. Hence the research hypothesis H_5 was partially accepted

Table-14: Association between selected demographic variables and pre test level of attitude in control group

(N=40)

Demographic Variables	Favorable attitude		Moderately favorable		Unfavorable attitude		χ^2
	f	%	f	%	f	%	
1.Age							
a. 13 years	16	40	4	10	1	2.5	0.568
b. 14 years	16	40	2	5	1	2.5	
2. Sex							
a. Male	10	25	0	0	2	2.5	3.009
b. Female	22	55	6	15	1	2.5	
3.Educational status							
a.8th std	14	35	4	10	2	5	3.167
b.9th std	18	45	2	5	0	0	
4.Number of siblings							
a.<1	27	67.5	4	10	2	5	1.544
b.2-3	5	12.5	2	5	0	0	
5.Fathers education							
a. Non formal education	4	10	1	2.5	0	0	
b. Schooling	20	50	3	7.5	1	2.5	2.611
c. Graduates	4	10	1	2.5	1	2.5	
d. Post graduates	4	10	1	2.5	0	0	
5.Mothers education							
a. Non formal education	2	5	0	0	0	0	
b. Schooling	20	50	5	12.5	1	2.5	
c. Graduates	2	5	0	0	1	2.5	6.873
d. Post graduates	8	20.0	1	2.5	0	0	
e. Professionals							

7.Mothers occupation							
a. House wife	10	25	2	5	0	0	9.338
b. Working mother	22	55	4	10	2	5	
8. Family income (Rs. Per month)							
	10	25	0	0	0	0	
a. <1000	10	25	3	7.5	1	2.5	8.705
b. 1001-5000	5	12.5	3	7.5	0	0	
c. 5001-10000	7	17.5	0	0	1	2.5	
d. >100000							
9. Area of residence							
a. Urban	16	40	2	2.5	0	0	2.290
b. Rural	16	40	4	5	2	2.5	
10. Dietary pattern							
a. Vegetarian	2	2.5	0	0	1	2.5	6.818
b. Non vegetarian	26	65	6	15	1	2.5	
c. Eggetarian	4	5	0	0	0	0	

The above table 14 showed that, there was no significant association between level of knowledge of early adolescent and demographic variables in control group. Hence the research hypothesis H_4 was rejected.

Table-15: Association between proforma related to fast food and level of knowledge of early adolescents in experimental group

(N=40)

Proforma related to fast food usage	Favorable attitude		Moderately favorable		Unfavorable attitude		χ2
	f	%	f	%	f	%	
1.Height							
a. <140 cm	4	10	2	5	0	0	2.298
b. 140-160 cm	27	67.5	4	10	2	5	
c. >160 cm	1	2.5	0	0	0	0	
2. Weight							
a. <35 kg	13	32.5	2	5	0	0	1.378
b. 36-65 kg	19	47.5	4	10	2	5	
3.BMI							
a. <20	25	62.5	3	7.5	2	5	
b.20-25	6	15	3	7.5	0	0	3.625
c.>25	1	2.5	0	0	0	0	
4.Type of snacks often takes to school							
a. Fruits and vegetables	20	50	6	15	1	2.5	
b. Lays, curcure etc	3	7.5	0	0	0	0	8.86
c. Biscuits	7	7.5	0	0	1	2.5	
d. Sweats	2	5	0	0	0	0	
5.Habit of fast food consumption during recreation							
a. Yes	23	50	5	12.5	1	2.5	14.27
b. No	9	7.5	1	2.5	1	2.5	*

6. If yes,							
a. While watching TV	20	50	3	7.5	0	0	
b. In theatre	2	5	1	2.5	0	0	14.27
c. While shopping	3	7.5	0	0	0	0	
d. Tournaments	1	2.5	0	0	1	2.5	
e .During break time	2	5	1	2.5	0	0	
7.Frequency of Consumption							
a. Never	14	35	1	2.5	1	2.5	
b. 1-3 times per week	17	42.5	4	10	1	2.5	7.074
c.3-4 times per week	0	0	1	2.5	0	0	
d. Daily	1	2.5	0	0	0	0	
8. pocket money (Rs/week)							
a. Nil	18	45	3	7.5	0	0	12.66
b. <50	7	17.5	3	7.5	0	0	
c. >50	7	17.5	0	0	2	5	
9. Source of information							
a. Teachers	12	30	2	5	1	2.5	
b. Mass media	5	12.5	0	0	0	0	4.535
c. Family members	4	10	1	2.5	0	0	
d. Friends	7	17.5	3	0	1	2.5	
e. Health professionals	4	10	0	0	0	0	
10. Type of fast food eating regularly							
a. No	10	25	3	7.5	1	2.5	
b.Soft drinks	11	27.5	2	5	0	0	2.458
c. Crispy items	9	22.5	1	2.5	1	2.5	
d. Noodles, fried rice, puffs, panipoori etc…	2	5	0	0	0	0	

*P<0.05 significant.

The above table 15 showed that, there was no significant association between level of knowledge of early adolescents and the habit of taking fast food in experimental group. Hence the research hypothesis H_5 is partially accepted.

Table-16: Association between selected demographic variables and pre test level of attitude in experimental group

(N=40)

Demographic Variables	Favorable attitude		Moderately favorable		Unfavorable attitude		χ^2
	f	%	f	%	f	%	
1.Age							
a. 13 years	16	40	4	10	1	2.5	0.568
b. 14 years	16	40	2	5	1	2.5	
2. Sex							
a. Male	10	25	0	0	2	2.5	3.009
b. Female	22	55	6	15	1	2.5	
3.Educational status							
a.8th std	14	35	4	10	2	5	3.167
b.9th std	18	45	2	5	0	0	
4.Number of siblings							
a.<1	27	67.5	4	10	2	5	1.544
b.2-3	5	12.5	2	5	0	0	
5.Fathers education							
a. Non formal education	4	10	1	2.5	0	0	
b. Schooling	20	50	3	7.5	1	2.5	2.611
c. Graduates	4	10	1	2.5	1	2.5	
d. Post graduates	4	10	1	2.5	0	0	
5.Mothers education							
a. Non formal education	2	5	0	0	0	0	
b. Schooling	20	50	5	12.5	1	2.5	6.873
c. Graduates	2	5	0	0	1	2.5	
d. Post graduates	8	20.0	1	2.5	0	0	

7.Mothers occupation							
a. House wife	10	25	2	5	0	0	9.338
b. Working mother	22	55	4	10	2	5	
8. Family income (Rs. Per month)	10	25	0	0	0	0	
a. <1000	10	25	3	7.5	1	2.5	8.705
b. 1001-5000	5	12.5	3	7.5	0	0	
c. 5001-10000	7	17.5	0	0	1	2.5	
d. >100000							
9. Area of residence							
a. Urban	16	40	2	2.5	0	0	2.290
b. Rural	16	40	4	5	2	2.5	
10. Dietary pattern							
a. Vegetarian	2	2.5	0	0	1	2.5	6.818
b. Non vegetarian	26	65	6	15	1	2.5	
c. Eggetarian	4	5	0	0	0	0	

The above table 16 showed that, there was no significant association between level of attitude of early adolescent and demographic variables in experimental group. Hence the research hypothesisH_4 was rejected.

Table-17: Association between proforma related to fast food and level of attitude of early adolescents in experimental group

(N=40)

Proforma related to fast food usage	Favorable attitude		Moderately favorable		Unfavorable attitude		$\chi 2$
	f	%	f	%	f	%	
1.Height							
a. <140 cm	4	10	2	5	0	0	2.298
b. 140-160 cm	27	67.5	4	10	2	5	
c. >160 cm	1	2.5	0	0	0	0	
2. Weight							
a. <35 kg	13	32.5	2	5	0	0	1.378
b. 36-65 kg	19	47.5	4	10	2	5	
3.BMI							
a. <20	25	62.5	3	7.5	2	5	3.625
b.20-25	6	15	3	7.5	0	0	
c.>25	1	2.5	0	0	0	0	
4.Type of snacks often takes to school							
a. Fruits and vegetables	20	50	6	15	1	2.5	8.86
b. Lays, curcure etc	3	7.5	0	0	0	0	
c. Biscuits	7	7.5	0	0	1	2.5	
d. Sweats	2	5	0	0	0	0	
5.Habit of fast food consumption during recreation							
a. Yes	23	50	5	12.5	1	2.5	14.27
b. No	9	7.5	1	2.5	1	2.5	*

6. If yes,							
a. While watching TV	20	50	3	7.5	0	0	
b. In theatre	2	5	1	2.5	0	0	14.27
c. While shopping	3	7.5	0	0	0	0	
d. Tournaments	1	2.5	0	0	1	2.5	
e .During break time	2	5	1	2.5	0	0	
7.Frequency of Consumption							
a. Never	14	35	1	2.5	1	2.5	
b. 1-3 times per week	17	42.5	4	10	1	2.5	7.074
c.3-4 times per week	0	0	1	2.5	0	0	
d. Daily	1	2.5	0	0	0	0	
8. pocket money (Rs per week)							
a. Nil	18	45	3	7.5	0	0	12.66
b. <50	7	17.5	3	7.5	0	0	
c. >50	7	17.5	0	0	2	5	
9. Source of information							
a. Teachers	12	30	2	5	1	2.5	
b. Mass media	5	12.5	0	0	0	0	4.535
c. Family members	4	10	1	2.5	0	0	
d. Friends	7	17.5	3	0	1	2.5	
e. Health professionals	4	10	0	0	0	0	
10. Type of fast food eating regularly							
a. No	10	25	3	7.5	1	2.5	
b.Soft drinks	11	27.5	2	5	0	0	2.458
c. Crispy items	9	22.5	1	2.5	1	2.5	
d. Noodles, fried rice, puffs, panipoori etc…	2	5	0	0	0	0	

*P<0.05 significant.

The above table 17 showed that, there was significant association between level of attitude of early adolescent and the habit of taking fast food in experimental group. Hence the research hypothesisH_5 was partially accepted.

Summary

This chapter has dealt with data analysis and interpretation of the study based on the hypothesis. Both descriptive and inferential statistics were used to analyze the data collected from 80 early adolescents. The findings were distributed and presented in 17 tables and 6 figures. Frequency, percentage, mean, standard deviation, correlation, table of significance and association were used in order to identify the effectiveness of video assisted teaching programme on knowledge and attitude towards the hazards of eating fast food among early adolescents were noted between the control and experimental groups. Significant differences in the knowledge and attitude by the experimental group were increased than the control group. This was statistically significant at $P<0.001$.

CHAPTER - V

DISCUSSION

This study was conducted to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude towards the hazards of fast food usage among selected early adolescents in Oddanchatram.

A Stratified random sampling technique was used to collect data from the study participants. 80 samples were taken, 40 in experimental and 40 in control group. Pretest and posttest was conducted. The Data were collected for a period of six weeks in selected schools at Oddanchatram. The discussion was based on the objectives of this study.

1.The first objective of this study was to assess to assess the pretest and post test level of knowledge and attitude towards hazards of eating fast food among early adolescence in the experimental and control group.

The finding showed that, majority of the students in control group (82.5%) had inadequate knowledge; and few of them (17.5%) had moderate knowledge about hazards of fast food in pre test and post test, whereas in experimental group most of the students (75%) had inadequate knowledge in the pre test, and in the post test very few students (5%) had inadequate knowledge. This indicates video assisted teaching programme on hazards of fast food was very effective in improving the knowledge of students.

The finding showed that, majority of the students in control group had favorable attitude (67.5, 65%) and very few had unfavorable attitude (5%, 5%) in pre test and post test, whereas in experimental group majority students had favorable attitude (80%) and

very few had moderately favorable attitude (5%) in pre test. After the video assisted teaching programme on fast food hazards almost all the students (95.5%) except few developed favorable attitude towards the hazards of fast food in experimental group.

The findings were supported by a descriptive study conducted by **Cho J Han Y (2004)** on higher secondary school students in December 2004 to identify their perceived knowledge and attitude towards fast foods hazards. The population in this study consisted of 1,050 middle and high school students aged 14~19 from five school districts in Bussan, Korea. The survey was done after training schoolteachers. The student survey was completed by 968 students (response rate:92%) which included 541 middle school and 435 high school students. Intervention to reduce frequency of fast food consumption or to improve the food choices at fast food restaurants may need to address not only the perceived convenience but also the importance of nutritious and healthy eating habits among adolescents.

The finding were supported by an experimental study conducted **by Rao DR, et al., (2007)** at four secondary schools of Hyderabad, India in 164 adolescent girls belonging to eighth grade to assess dietary habits and nutrition knowledge and attitude levels of the adolescents from different schools and to study the efficacy of two different nutrition educational tools in improving their nutritional knowledge and attitude level in the classroom setting. In total, two interventions (1. Traditional method using print media such as folders leaflets and charts; 2. VIDEO CD on fast food hazards were carried out in a classroom setting for the experimental group. FFQ data on dietary consumption of adolescents revealed more consumption of aerated drinks, bakery items, fast foods and less consumption of millets irrespective of their socio-economic conditions. A significant

improvement in the nutrition related knowledge and attitude level was observed among the experimental group after interventions-1and -2 as compared to the baseline data. However, no significant difference in the improvement of nutritional knowledge and attitude levels was observed with the second intervention over the first intervention as already the children in the experimental group gained knowledge and favorable attitude through video teaching on fast food hazards. Education on ill effects of fast food and the importance of nutrition during the adolescent phase should be emphasized in future programmes.

2. The second objectives of this study was to evaluate the effectiveness of video assisted teaching program on knowledge and attitude towards hazards of eating fast food among early adolescence.

The finding revealed that obtained‘t’ value was found to be statistically significant at P<0.001 in post test level of knowledge between control (t=6.32) and experimental group(t=13.65), whereas the pretest test level of knowledge was not statistically significant. This showed that the video assisted teaching programme was very effective in improving the level of knowledge regarding hazards of fast food among early adolescent.

The result revealed that, obtained ‘t’ (2.0945) value found to be statistically significant at P<0. 05 in post test level of attitude in control and experimental group of early adolescents; whereas the pretest test level of knowledge was not statistically significant. This showed that the video assisted teaching programme was effective in improving the level of attitude regarding hazards of fast food among early adolescents.

The finding were supported by an experimental study by conducted **Uma Maheswari, (2011),** to evaluates the effectiveness of video teaching program on knowledge and attitude of sexually transmitted infections among female sex workers at Madurai. She adopted experimental design, Convenience sampling technique to find out the effectiveness of video assisted teaching program, Mean score in post test was higher than pretest knowledge and attitude .It was M= 61.45 and M=69.43 respectively. There was significant difference between pre test and post test knowledge and attitude regarding sexually transmitted infections among female sex workers they were t=42.12and respectively significant at 0.05 level. This showed that the video teaching programme was effective. It was observed that video teaching programme plays a vital role in improving the knowledge and attitude of female sex workers.

3. The third objective of this study was to correlate the knowledge and attitude towards hazards of eating fast food among early adolescence.

The finding revealed that, there was a correlation (r=0.414) between posttest level of knowledge and level of attitude in experimental group. It was statistically significant at $p<0.01$. It was inferred that there was a positive correlation between posttest knowledge and attitude towards the hazards of fast food in experimental group. This indicated that the attitude of the students can be influenced by knowledge and vise versa.

The results were supported by a study to assess the effectiveness of video assisted teaching programme on knowledge and attitude regarding smoking and smokeless tobacco use and its health hazards in Bangalore. 100 girls and boys of school students were used as samples. The data collected were analyzed and interpreted based on

descriptive and inferential statistics. In pre-test, 35(70%) boys and 41 (82%) girls had poor knowledge, 15(30%) boys and 9 (18%) girls had average knowledge and none of the sample had good knowledge. Whereas in posttest none of the students had poor knowledge, 13 (26.0%) boys and 22 (44%) girls had average knowledge and 37 (74.0%) boys and 28 (56%) girls have gained good knowledge regarding smoking and smokeless tobacco use and its health hazards. In pre-test, only 23(54%) boys and 11 (22%) girls had positive attitude towards non tobacco use and tobacco control programme and 27(46%) boys and 39 (78%) girls had negative attitude towards non tobacco use and tobacco control programme. But in posttest majority 48 (96%) boys and 50 (100%) girls showed positive attitude towards non tobacco use and tobacco control programme. There was significant difference between mean posttest knowledge score of boys (18.36) and mean pretest knowledge score (7.48). The finding of the present study reveals that there is a significant gain in knowledge and change in attitude among school students following video assisted teaching programme. Therefore such program may be used to promote awareness among school students regarding tobacco use and its ill effects on health.

4. The fourth objective of this study was to find out the association between pre test level of knowledge and attitude with selected demographic variables regarding hazards of eating fast food among early adolescence.

The finding revealed that, there was no significant association between knowledge of early adolescents and demographic variables in control and experimental group. The post test related to the demographic variable was not true difference and only by chance and the research hypothesisH_4 was rejected.

The finding revealed that, there was no significant association between attitude of early adolescents and demographic variables in control and experimental group. The posttest related to the demographic variables was not true difference and only by chance and the research hypothesisH_4 was rejected.

The findings were supported conducted a Pre-experimental study by Vandana Sharma (2013) to assess the effectiveness of structured teaching program on knowledge and attitude regarding harmful effects of Junk food among adolescents. This study was conducted in 3 selected schools at District Jalandhar, Punjab. Total 60 adolescents those who met the inclusion and exclusion criteria were selected by non probability convenience sampling technique. The pre-test was taken by using self structured questionnaire followed by structured teaching programme. After 7 days post- test was taken. The mean percentage of the knowledge score of post test (22.88) was higher than pre test (12.96). The 't' value for total pre test and post test was 16.76.The difference between pre-test knowledge score and post test knowledge scores was 9.92. It means the knowledge score increased after structured teaching programme. The association between the demographic variables were not significant with the knowledge and attitude of adolescents. The findings of study revealed that the education had a vital role in improving the knowledge of adolescents regarding harmful effects of Junk food.

5. The fifth objective of this study was to find out the association between pre test level of knowledge and attitude with profroma related to fast food regarding hazards of eating fast food among early adolescence.

The finding revealed that, there was a significant association between level of knowledge of early adolescents and the habit of taking fast food in control and experimental group. The posttest related to the demographic variables was not true difference and only by chance and the research hypothesisH_4 was rejected.

The finding revealed that, there was a significant association between level of attitude of early adolescents and the habit of taking fast food in control and experimental group. The posttest related to the demographic variables was not true difference and only by chance and the research hypothesisH_5 was partially accepted.

The findings were supported by a cross-sectional study conducted by **LiM, Dibley MI, et al (2010)** at Xi'an City, China to explore the association between dietary habits, knowledge and attitude of adolescents . A sample of 1804 adolescents was recruited from 30 high schools in six districts of Xi'an City, northwest China. Weight and height was measured and eating habits, pretest and post test knowledge and attitude were assessed using a self-administered questionnaire. In boys, an increased consumption of soft drinks was associated with increased risk of overweight and obesity (1100 ml/day, OR: 1.9, 95% CI: 1.1-3.8), while consuming preserved fruit was associated with decreased. In girls, having breakfast outside the home and an increased consumption of energy-dense foods was associated with increased risk of overweight and obesity, while frequently having foods and beverages outside for three main meals was associated with

decreased risk. The study concluded that the habit of consumption of Fast foods were positively associated with knowledge and attitude of adolescents. Future health education programs should be initiated to prevent such unhealthy eating habits.

Summary

This chapter dealt about the major findings of this study which were discussed based on their objectives of the study and supportive findings were quoted.

CHAPTER-VI

SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATIONS

This chapter gives brief account of the present study along with the conclusion drawn from the findings, recommendation, implication, conclusion, suggestions for further studies and nursing implications.

SUMMARY OF THE STUDY

The focus of the present study was to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude towards the hazards of fast food usage among selected early adolescents at Oddanchatram.

Objectives of the study were

1. To assess the pretest and post test level of knowledge and attitude towards hazards of eating fast food among early adolescence in the experimental and control group.
2. To evaluate the effectiveness of video assisted teaching program on hazards of eating fast food among early adolescence.
3. To correlate the knowledge and attitude towards hazards of eating fast food among early adolescence.
4. To find out the association between pretest level of knowledge and attitude with selected demographic variables regarding hazards of eating fast food among early adolescence.
5. To find out the association between pretest level of knowledge and attitude with selected variables related to fast food among early adolescence.

HYPOTHESIS:

H_1: The mean post test level of knowledge and attitude will be significantly higher among the early adolescence in experimental group than the mean pretest level

H_2: The mean post test level of knowledge and attitude in experimental group will be significantly higher than the mean post test in control group

H_3: There will be a significant correlation between level of knowledge and attitude on hazards of eating fast food among early adolescence

H_4: There will be a significant association between level of knowledge and attitude on hazards of eating fast food and selected demographic variables.

H_5: There will be a significant association between fast food usage and level of knowledge and attitude towards hazards of fast food.

A review of related literature helped the investigator to develop the conceptual framework, tools; methodology of this study, The review of literature was organized Under the following heading:

Studies related to,

1. changing trends in eating pattern and promoting factors of eating fast food among adolescents,
2. knowledge and attitude regarding fast food hazards among adolescents,
3. health hazards of fast food,
4. effectiveness of video assisted teaching programs.

The research design adopted for the study was pretest, posttest control group design with evaluative in approach. The conceptual framework of the study was based of Nola Pender Health Promotion Model (1997).The instrument used for data collection was a structured knowledge questionnaire on hazards on fast food hazards and checklist to assess the attitude on fast food usage which was prepared based on the review of literature and opinion from the subjects experts. The video assisted teaching was covering the introduction of fast food, types, ingredients, hazards of fast food usage, and prevention of fast food hazards. The time taken for the programme was around 30 minutes.The tool and video assisted teaching was found to be valuable and feasible. The reliability of the tool was established by the test and retest method.

Pilot study was conducted in selected schools at Oddanchatram. 8 samples were taken, 4 in experimental and 4 in control group. Pretest and post test was conducted. The pilot study helped the investigator to confirm the feasibility of carrying out the main study.

The main study was conducted in selected schools at Oddanchatram for a period of six weeks. A stratified random sampling technique was used to collect data from the study participants.

Major findings of the study were

Most of the early adolescents were in the age group of 13 years(52.5%), male (52.5%), father and mother educated up to schooling (60%,65%), residing in rural area (55%) and non vegetarian (82.5%). Few of them had their monthly family income between 1001-5000(35%) in control group.

In experimental group most of the early adolescents were aged 14 years (65%), female (65%) father and mother educated up to schooling (60%, 65.5%). Equal numbers of students were from urban and rural area (50%). Few of them had their monthly family income between1001-5000(37.5%).

Their educational statuses were equally distributed in 8th and 9th std (50%) in control and experimental group. Most of the students had working mother in control group (65%), but in experimental group, most of the students' mothers were not working (52.5%).

Most of the early adolescents had height between 140 and 160cm (67.5%, 82.5%), weight between 36 and 65kg (67.5%, 62.5%) and not received pocket money (67.5%, 55%). Very few of them used to bring sweats to school as a snacks (10%,5%), and consume fast food usually while going for shopping (2.5%,7.5%) for about 3-4 times per week (10%,2.5%) and drink soft drinks (7.5%) regularly, and their source of information was health professionals (2.5%,10%) in control and experimental group respectively. Majority of the early adolescents had BMI less than 20(67.5%, 75%) and very few had BMI more than 25 (5%, 2.5%) and the habit of fast food consumption during recreation (62%, 72%) in control and experimental group.

Majority of the students in control group (82.5%) had inadequate knowledge; and few of them (17.5%) had moderate knowledge about hazards of fast food in pre test and post test whereas in experimental group most of the students (75%) had inadequate knowledge in the pre test, and in the post test very few students (5%) had inadequate

knowledge. This indicates video assisted teaching programme on hazards of fast food was very effective in improving the knowledge of students.

Majority of the students in control group had favorable attitude (67.5, 65%) and very few had unfavorable attitude (5%, 5%)in pre test and post test whereas in experimental group majority students had favorable attitude (80%) and very few had moderately favorable attitude (5%) in pre test. After the video assisted teaching programme on fast food hazards almost all the students (95.5%) except few developed favorable attitude towards the hazards of fast food in experimental group.

The mean value in pre test score was M=10.05, M= 10.1 in control and experimental group and the standard deviation was SD=2.54, SD= 2.52 1 in control and experimental group. But in post test the mean and standard deviation (M=18.13, SD=2.95) were increased in experimental group than the control group. The obtained't' value of the pretest and post test level of knowledge in control(t=6.32) and experimental (t=13.65) group was found to be significant. It was inferred that the early adolescents who exposed to the video assisted programme had significant increase in level of knowledge and it was statistically significant at $p<0.001$. Hence H_1 was accepted.

The obtained't' (t=13.14) value was found to be statistically significant at $P<0.0001$ in post test level of knowledge between control and experimental group. This showed that the video assisted teaching programme was very effective in improving the level of knowledge regarding hazards of fast food among early adolescents. Hence research hypothesis H_2 was accepted.

The mean M=7.85, M=7.8 and standard deviation SD=1.6, SD=1.4 in control group during pre and post test. Where as in experimental group the post test mean (M=8.4) and standard deviation (SD=1.15) are significantly increased. Obtained 't' valueof the pretest and post test level of attitude in control (t=6.32) and experimental group (t=13.65) was found to be significant. It was inferred that the early adolescents who exposed to the video assisted teaching programme had significant increase in level of attitude and it was statistically significant at $p<0.001$. Thus research hypothesis H_1 is accepted.

The obtained't' value found to be statistically significant at P<0. 05 in post test level of attitude in control and experimental group of early adolescents. This showed that the video assisted teaching programme was effective in improving the level of attitude regarding hazards of fast food among early adolescents. Hence research hypothesis H_2 was accepted.

The result revealed that, there was a correlation (r=0.414) between posttest level of knowledge and level of attitude in experimental group at P<0.001. It was inferred that there was a positive correlation between posttest knowledge and attitude towards the hazards of fast food in experimental group. Thus research hypothesis H_3 was partially accepted.

There was no significant association between knowledge and attitude of early adolescents and demographic variables in control and experimental group. Thus research hypothesis H_4 was rejected.

There was significant association between level of knowledge and attitude of early adolescents and habit of taking fast food in control and experimental group. Thus research hypothesis H_5 was partially accepted.

CONCLUSION

The main conclusion of this present study was the video assisted teaching programme could effectively increase the knowledge and attitude towards the hazards of fast food usage among selected early adolescents. This study clearly stated that video teaching programme plays a vital role in improving knowledge and promoting attitude towards the hazards of fast food usage among selected early adolescents.

IMPLICATIONS

The findings of the study have several implications in following field. It can be discussed of four areas namely nursing practice, Nursing administration, Nursing education and Nursing research.

Nursing practice

- The study findings will help the School Health Nurse/Pediatric Nurse to create awareness to the early adolescents towards the hazards of fast food usage.
- Nurses have great responsibilities to improve Knowledge and attitude towards the hazards of fast food usage among early adolescents.
- The child health nurses can plan, implement and evaluate various teaching programmes regarding the hazards of fast food usage among early adolescent.

- The video assisted teaching programme could act as a guideline for the nursing personnel to give health education to early adolescents.

- The Nurse Can co –ordinates with other health team members and conduct awareness programme to early adolescents.

Nursing education

- With the emerging health care trends, nursing education must force on non pharmacological innovations to enhance the nursing care
- This study will be an eye opener for future Nursing students to pay attention in collection materials for health education of early adolescents regarding fast food hazards.
- It helps to educate the undergraduate students with facts on the hazards of fast food usage among selected early adolescents.
- The student Nurse may be educated to teach the community with the different aspects of knowledge regarding hazards of fast food usage among selected early adolescents.

Nursing administration

- With technological advances and the ever growing challenges of health care needs, the administrators have a responsibility to provide nurses with substantive confines education opportunities. This will enable the nurses to provide uptodate thie knowledge on fast food hazards to adolescents.
- The child health Nurse administrator should to arrange for conference, continuing education programme and seminars related to hazards of fast food usage among

selected early adolescents with modern technological video aids to gain adequate knowledge.

- In addition, Pamphlets, handouts and booklets should be kept in the schools, about hazards of fast food consumption.
- Nursing administration should provide more number of child health Nurses in order to access and educate the people to have healthy children in our country.

Nursing research

- There is a need for extensive and intensive research in this area. It opens a big avenue for research in the innovative methods.
- The study motivates the other investigator to conduct further studies regarding hazards of fast food usage among selected early adolescents.
- This study can be a baseline for the future studies to build upon.
- Extensive research can be conducted to create awareness in the schools regarding hazards of fast food usage among selected early adolescents.

RECOMMENDATIONS

- The similar study can be conducted on a large sample in long duration to generalize the study findings.
- Similar study can be conducted as an mass awareness programme
- A same study can be conducted among different population.
- A same study can be conducted using different methods of teaching (peer mediated teaching)
- Same study can be replicated using different A.V Aids.

Summary

This chapter dealt with the findings of the study related to demographic characteristics, proforma related to fast food hazards, knowledge and attitude of regarding hazards of fast food usage among selected early adolescents. This chapter also includes major implication of the study in nursing area as nursing practice, nursing administration, nursing education and nursing research.

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APPENDIX-A

Letter-1

Letter Seeking Permission to conduct the Study

SAKTHI COLLEGE OF NURSING

(Approved by Govt. of Tamilnadu, Recognised by INC, TNC & Affiliated to Dr. M.G.R. Medical University)

Sakthi Nagar, Dindigul - Palani Main Road,
Palakkanuthu - (Po.),
Oddanchatram - 624 619.
Dindigul (Dt.), Tamilnadu.

Phone : 0451 - 2050272
Mobile : 97509 56810
Fax : 0451-2554317
E-mail : sakthinursingcollege@gmail.com

Dr.K.Vembanan, M.B.B.S., M.S.,
Chairman

PERMISSION LETTER

From

The Principal,
Sakthi College of Nursing,
Oddanchatram, Dindigul (Dt)

To

The Principal,
Holy Cross Matric Higher Secondary School,
Oddanchatram, Dindigul (Dt).

Respected Sir / Madam,

Sub.: Request for permission to conduct research study – reg.

Mrs. FLORY INFANTA .L is a bonafide M.Sc., Nursing student studying in our college. As a partial fulfillment of The Tamilnadu Dr. MGR Medical University requirement for the award of the M.Sc., Nursing Degree, she is undertaking **(An experimental study to evaluate "THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AND ATTITUDE TOWARDS HAZARDS OF EATING FAST FOOD AMONG EARLY ADOLESCENCE IN SELECTED SCHOOL AT ODDANCHATRAM")**, she has identified your centre as the best place to conduct the study.

Further details of the proposed project will be furnished by the student personally. She will not hinder your routine in any way and she will abide to the rules and regulations of the institution. All the information collected from institution will be kept confidential.

I kindly request you to grant her permission to conduct the study at your esteemed institution.

Thanking you,

Yours sincerely,

Date : 01.09.2014.

Permission granted
1/9/14.
PRINCIPAL
Holy Cross Matric.Hr.Sec.School
Dharapuram Road
ODDANCHATRAM—624619

Place :

Letter-2

Letter Seeking Permission to conduct the Study

SAKTHI COLLEGE OF NURSING

(Approved by Govt. of Tamilnadu, Recognised by INC, TNC & Affiliated to Dr. M.G.R. Medical University)

Sakthi Nagar, Dindigul - Palani Main Road,
Palakkanuthu - (Po.),
Oddanchatram - 624 619.
Dindigul (Dt.), Tamilnadu.

Phone : 0451 - 2050272
Mobile : 97509 56810
Fax : 0451-2554317
E-mail : sakthinursingcollege@gmail.com

Dr.K.Vembanan, M.B.B.S., M.S.,
Chairman

PERMISSION LETTER

From

The Principal,
Sakthi College of Nursing,
Oddanchatram, Dindigul (Dt)

To THE PRINCIPAL,
CHRISTIAN MATRIC HIGHER SECONDARY SCHOOL,
ODDANCHATRAM.

Respected Sir / Madam,

Sub.: Request for permission to conduct research study – reg.

Mrs. FLORY INFANTA .L is a bonafide M.Sc., Nursing student studying in our college. As a partial fulfillment of The Tamilnadu Dr. MGR Medical University requirement for the award of the M.Sc., Nursing Degree, she is undertaking **(An experimental study to evaluate "THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AND ATTITUDE TOWARDS HAZARDS OF EATING FAST FOOD AMONG EARLY ADOLESCENCE IN SELECTED SCHOOL AT ODDANCHATRAM")**, she has identified your centre as the best place to conduct the study.

Further details of the proposed project will be furnished by the student personally. She will not hinder your routine in any way and she will abide to the rules and regulations of the institution. All the information collected from institution will be kept confidential.

I kindly request you to grant her permission to conduct the study at your esteemed institution.

Thanking you,

Yours sincerely,

Date : 25.8.2014.

Place : ODDANCHATRAM.

Permission Granted.
25/8/'14
PRINCIPAL
CHRISTIAN MATRICULATION
HIGHER SECONDARY SCHOOL,
ODDANCHATRAM - 624 619.

APPENDIX-B

LETTER SEEKING PERMISSION FOR CONTENT VALIDITY

From

Flory Infanta.L.,

M.Sc, Nursing,II year,

Oddanchatram.

To

Respected sir,

Sub : Requisition for expert opinion and content validity regarding.

I, Flory Infanta.L., am a II year M.Sc (N) Student, studying in Sakthi College Of Nursing, Oddanchatrum, Dindigul, As a Partial fulfillment of M.Sc Nursing degree program, I am conducting a research study on "**An experimental study to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude towards hazards of eating fast food among early adolescence in selected school at Oddanchatram"** for the study, I have developed a questionnaire to assess the knowledge and a checklist to assess the attitude of high school students regarding hazards of fast food.

I am sending the research tool for content validity and request you to give your expert and valuable review and opinion. I will be very thankful if your return at the earliest. Here with I have enclosed the necessary documents.

Thanking you

Yours sincerely

Enclosures

1. Statement of the problem & objectives of the study
2. Tool with blue Print& scoring key
3. Brief note on the research methodology and intervention tool
4. Certificated of content validity

APPENDIX-C

CERTIFICATE OF CONTENT VALIDITY

TO WHOM SO EVER IT MAY CONCERN

This is to Certify that the tool prepared by Flory Infanta.L., II Year M.Sc(N) Student of Sakthi College of Nursing for the conduction of the **"An experimental study to evaluate the effectiveness of video assisted teaching programme on knowledge and attitude towards hazards of eating fast food among early adolescence in selected school at Oddanchatram"** is valid. She can proceed in conducting the data collection with it.

Signature

Place :
Date :

APPENDIX -D

LIST OF EXPERTS

1. **Prof.Mrs.Janahi Devi, M.Sc(N),**
   The Principal,
   Sakthi College of Nursing,
   Oddanchatram.

2. **Prof.Dr.S.Rajina Rani M.Sc(N), Ph.D.,**
   The principal,
   Doctors college of nursing,
   PudukKottai

3. **Mrs. Arokia Mary, M.Sc(N).,**
   The Vice Principal,
   Christian College of Nursing,
   Ambilikkai, Dindigul.

4. **Mrs.Nesa Sathya Satchi M.Sc. (N), Ph.D.,**
   Professor in Nursing,
   Appolo College Of Nursing,
   Chennai

5. **Mr.Jothilakshmi, M.Sc.(N).,**
   Professor in Nursing,
   Sacred Heart College of Nursing,
   Madurai

6. **Dr. Sachin George M.D.,**
   Pediatrician,
   C.F.Hospital,Oddanchatram.

7. **Mr.Mani,**
   Lecturer in Biostatistics,
   Aravind Eye Hospital,
   Madurai.

APPENDIX-E_1

RESEARCH CONCENT FORM

Dear Participant Students,

I am FLORY INFANTA.L. M.Sc. Nursing Student of Sakthi College of Nursing, Oddanchatram. As a part of my Study, a research on "Effectiveness of Video assisted teaching programme on knowledge and attitude towards the hazards the fast food among early adolescents" is to be conducted. The study will be helpful in increasing the knowledge and attitude regarding hazards the fast food.

I hereby seek your consent and co-operation to participate in the study. Please be frank and honest in your responses. The information collected will be kept confidential and anonymity will be maintained.

Thanking You,

Signature of the researcher

I ……. Hereby consent to participate and undergo the study

Place:

Date:

Signature of the participant

APPENDIX- E_2

Ma;tpy; gq;F nfhs;s xg;Gjy; gbtk;

md;ghh;e;j khzt khztpfNs.>

jpUkjp. gpshup ,d;ngd;lh Mfpa ehd; rf;jp nrtpypah; fy;Y}upapy; nrtpypah; gapw;rpapy; KJfiy gl;lk; ngWtjw;F gapw;rpapd; xU gFjpahf Jhpj czT gad;gLj;Jtjhy; Vw;gLk; tpisTfis gw;wp xU FWk;glk; %yk; nghJ mwpTj;jpwd; kw;Wk; kdg;ghd;ik mwptjw;fhf Ma;Tnra;fpNwd;.

,jdhy; ,e;j Muha;r;rpapy; ePq;fs; gq;F ngw cq;fSila xg;Gjy; kw;Wk; xj;Jiog;igAk; Ntz;LfpNwd; NkYk; cq;fSila gjpy;fs; ntspg;gilahfTk;> cz;ikahfTk; ,Uf;f Ntz;Lk;. cq;fSila Fwpg;Gfs; ,ufrpakhf itf;fg;gLk; kw;Wk; cq;fSila ngah; NtW vq;Fk; ntspaplg;glkhl;lhJ.

Muha;rpahsupd; ifnahg;gk;

..... vd;w ehd; ,e;j Muha;r;rpapy; gq;F ngw xg;Gjy; mspf;fpNwd;

gq;FngWNthupd; ifnahg;gk; :

APPENDIX- F

CERTIFICATE FOR ENGLISH EDITING
TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation titled "Effectiveness of video assisted teaching Programme on knowledge and attitude towards the hazards of fast food among selected adolescents at Oddanchatram "by Flory Infant L., II Year M.Sc. (N) Sakthi College of Nursing was edited for English Language appropriateness by **Ms. Sathiya, M.A., M.Phil., MBA.**, HOD of English Department, Sakthi College of Arts and Science

Signature

APPENDIX- G

CERTIFICATE FOR TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is certify that the tools demographic variables, Structured knowledge questionnaire , Rating Scale "to evaluate the Effectiveness of video assisted teaching Programme on knowledge and attitude towards the hazards of fast food among selected adolescents at Oddanchatram" by Flory Infant L., II Year M.Sc.(N) Sakthi College of Nursing for her dissertation titled "**Effectiveness of video assisted teaching Programme on knowledge and attitude towards the hazards of fast food among selected adolescents at Oddanchatram"** was edited for Tamil Language appropriateness by **Mr. V. Sakthivel, M.A., AMA., M.Ed.,** Vice Principal, Sakthi College of Arts and Science.

Signature

APPENDIX- H_1

PART – I

DEMOGRAPHIC VARIABLES

Purpose

This is used to measure the Demographic variables includes age, Sex, educational status, No of Siblings, Father's education, Mother's education, Mother's occupation, Area of residence, family income and dietary pattern

Instructions to participants,

Kindly place a tick mark (✓) for the most appropriate answer given in the bracket provide to the side of each item. The information will be kept confidential. Don't leave any questions without answering.

1. Sample No. ( )
    1. Age (in years)
        a. 13 ( )
        b. 14 ( )
        c. 15 ( )
    2. Sex
        a. Male ( )
        b. Female ( )
    3. Educational status
        a. 8^{th} (standard) ( )
        b. 9^{th} (standard) ( )
    4. No of siblings
        a. 1 ( )

b. 2-3 ( )

c. >3 ( )

5. Fathers education

   a. Non formal education ( )

   b. Schooling ( )

   c. Graduate ( )

   d. Post graduate ( )

6. Mothers education

   a. Non formal education ( )

   b. Schooling ( )

   c. Graduate ( )

   d. Post graduate ( )

7. Mothers occupation

   a. House wife ( )

   b. Working mother ( )

8. Family income(Rupees/month)

   a. Rs. 1001-5000 ( )

   b. Rs. 5001-10000 ( )

   c. Rs. >10000 ( )

9. Area of residence

   a. Urban ( )

   b. Rural ( )

10. Dietary pattern

   a. Vegetarian ( )

   b. Non vegetarian ( )

   c. Eggetarian ( )

PART -2

PERFORMA RELATED TO FAST FOOD USAGE

Purpose

This is used to measure the base line data related to fast food usage among early adolescence.

Instructions:

- Please read the question and answer carefully choose the right answer and put the (✓) mark against the right answer

1. Height (cm) ----------
    a. <140 ( )
    b. 140-160 ( )
    c. >160 ( )
2. Weight (kg) ----------
    a. <35 ( )
    b. 35-65 ( )
    c. >65 ( )
3. B.M.I.----------(average)
    a. <20 ( )
    b. 20-25 ( )
    c. >25 ( )
4. Type of snacks often takes to school
    a. Fruits and vegetables ( )
    b. Lays, cur cure, etc ( )
    c. Biscuits ( )
    d. Sweats
5. Habit of fast food consumption during recreation

a. Yes ( )

b. No ( )

6. If yes,

a. While watching TV, ( )

b. In theatre ( )

c. While shopping ( )

d. Tournaments ( )

e. During break times ( )

7. Frequency of consumption

a. Never ( )

b. 1-4 times per week ( )

c. More than 4 times per week ( )

d. Daily ( )

8. Pocket money(rupees/week)

a. Nil ( )

b. Rs.<50 ( )

c. Rs >50 ( )

9. Source of information

a. Teacher's ( )

b. Mass media ( )

c. Family members ( )

d. Friends ( )

10. Type of fast food eating regularly

a. No ( )

b. Soft drinks(Pepsi, choc cola etc) ( )

c. Crispy items ( )

d. Noodles, fried rice, puffs, panipoori ( )

e. Fried meat(chicken 65, chili chicken) ( )

PART -3

KNOWLEDGE QUESTIONNAIRE ON HAZARDS OF FAST FOOD

Purpose

This tool will be used to assess the knowledge regarding fast food hazards.

Instructions to participants,

- Kindly place a tick mark (✓)for the most appropriate answer given in the bracket provide to the side of each item.
- Each correct answer will be given the score one (1)
- Wrong answer will be given the score zero (0).

1. Fast food means----------.

a. Foods which prepared in shop, hotel or restaurant ( )

b. Foods that can be used by people frequently. ( )

c. Foods that is high in salt, fat or caloric value. ( )

d. Foods which has less vitamins ( )

2. Example for a popular fast food is ----------.

a. Dossai ( )

b. Poori ( )

c. Noodles ( )

d. Parotta ( )

3. The Chinese fast food given below is----------.

a. Fried rice ( )

b. Samosa ( )

c. Machurians ( )

d. Puffs ( )

4. The fast food ingredient that causes cancer is----------.

a. Soya sauce ( )

b. Ajinomoto ( )

c. Garam masala ( )

d. Soda powder ( )

5. The ingredient present in pepsi or choccola is ----------

a. Calcium ( )

b. Magnesium ( )

c. Sulfate ( )

d. Malathion ( )

6. Magi contains more amount of ----------

a.Wheat ( )

b. Taste maker ( )

c. Sulfate ( )

d. High salt ( )

7. The non-nutritious substances which is present in fast food to improve appearance, flavor, texture is----------

a. Food addictives ( )

b. Cristal salts ( )

c. Baking soda ( )

d. Chocó powder ( )

8. Soft drinks contain ----------

a. Low in sugar ( )

b. Low in saccrine ( )

c. Low in addictives ( )

d. Low in calcium ( )

9. The effects of repeated use of oil for frying is ----------

a. Improper functioning of liver ( )

b. Cancer ( )

c. Diabetes ( )

d. Poor functioning of kidney ( )

10. The effect of excessive intake of caffeine rich drinks----------

a. Fever and vomiting ( )

b. hypertension and anxiety ( )

c. lack of concentration and nervousness ( )

d. lack of interest and memory ( )

11. Drinking excess soft drinks can leads to----------

a. Skin diseases ( )

b. Bone diseases ( )

c. Liver diseases ( )

d, Kidney diseases ( )

12. The health effect of using fried crispy items in their daily menu is ----------

a. Increased blood pressure ( )

b. Diabetic ( )

c. Thyroid gland enlargement ( )

d. Cancer ( )

13The common cause of tooth decay and obesity is because of using ----------

a. Puffs ( )

b. Pizza ( )

c. Chocolates ( )

d. Vadai ( )

14. The food item has more bad cholesterol is ----------

a. Pizza ( )

b. Sandwiches ( )

c. Noodles ( )

d. Fried rice ( )

15. High proportion of saturated fat can cause----------

a. Diarrhea ( )

b. Ulcer in stomach ( )

c. Increased in blood pressure ( )

d. Increased in blood sugar ( )

16. The ingredient used to prepare parotta is----------

a. palm oil ( )

b. Dalda ( )

c. Refined oil ( )

d. Coconut oil ( )

17. The factor mainly responsible for increasing the intake of fast food is----------

a. High calorie ( )

b. Low nutritive value ( )

c. Skipping of meals ( )

d. Availability ( )

18. Western style fast food intake increasing the risk of ----------

a. Intestinal disorders ( )

b. Bone disorders ( )

c. Hormone disorders ( )

d. Heart disorders ( )

19. Excessive intake of animal fat leads to ----------

a. Brain ( )

b. Lungs ( )

c. Heart ( )

d. kidney ( )

20. Meals should be planned according to ----------

a. Food pyramid ( )

b. Desire ( )

c. easy preparations ( )

d. Food availability ( )

21. In promoting healthy life you have to avoid ----------

a. Low caloric foods ( )

b. High caloric foods ( )

c. High fatty foods ( )

d. High carbohydrate foods ( )

22. The best method of cooking foods for healthy life is----- ----------

a. Frying ( )

b. Deep frying ( )

c. Boiling ( )

d. Roasted ( )

23Good memory and attention span develops when we avoid ----------

a. Soda beverages ( )

b. Chinese fast foods ( )

c. Deep fried foods ( )

d. Crispy items ( )

24.The red color coding present in fast food covers denotes ---------- .

a. Good to health ( )

b. Can be eaten with caution ( )

c. Causing some disease ( )

d. Stop eating ( )

25. The color coding for the pizza is ----------.

a. Red ( )

b. Blue ( )

c. Yellow ( )

d. Green ( )

ANSWER KEY

KNOWLEDGE QUESTIONNAIRE ON HAZARDS OF FAST FOOD

1	c	11	d	21	b
2	c	12	b	22	c
3	c	13	c	23	c
4	b	14	a	24	d
5	d	15	c	25	c
6	b	16	a		
7	a	17	c		
8	d	18	d		
9	b	19	c		
10	c	20	a		

APPENDIX H $_3$

PART III

CHECK LIST FOR ASSESSING THE ATTITUDE TOWARDS FAST FOOD HAZARDS

Purpose:

This check list will be used to assess the attitude level regarding fast food hazards.

Instructions:

Please indicate the following statements by entering a tick (✓) mark against the symbol column to the right side of each statement according to your attitude as yes or no.

S.NO	ITEMS	YES	NO
1.	Soft drinks are beneficial to one's health		
2.	There is nothing wrong in taking fast foods occasionally		
3.	Use of fast foods is a sign of modernization		
4.	The advertisements encouraging fast foods should be banned		
5.	Prevention of fast food consumption is better than cure diseases		
6.	It is advisable to read labels and ingredients while purchasing fast foods		
7.	Lack of parental attention promotes fast food consumption		
8.	Fast foods can be taken daily once		
9.	Fast foods are meant only for adolescence		
10.	Self control place a major role in preventing the intake of fast food		

ANSWER KEY

PART III

CHECK LIST FOR ASSESSING THE ATTITUDE TOWARDS FAST FOOD HAZARDS

1	N
2	N
3	N
4	Y
5	N
6	Y
7	Y
8	N
9	N
10	Y

APPENDIX I_1

gFjp – 1

jdp egH tpguq;fis gw;wp mwpAk; gbtk;

epge;jidfs; :

- fPNo nfhLf;fg;gl;Ls;s Nfs;tpfis ftdkhf gbj;J rupahd gjpy;fSf;F Neuhf (✓) FwpaplTk;.
- vy;yh Nfs;tpfSf;Fk; gjpyspf;fTk;.
- ,e;j tpguq;fs; ghJfhg;ghf itf;fg;gLk;.

1. taJ (tUlq;fspy;)

   m.13 ( )

   M.14 ( )

   ,.15 ( )

2. ghypdk;

   m.Mz; ( )

   M.ngz; ( )

3. fy;tpj; jFjp

m.8 Mk; tFg;G ( )

M.9 Mk; tFg;G ( )

4. cld;gpwe;jtu;fspd; vz;zpf;if

m. 1 ( )

M. 2–3 ( )

,. >3 ( )

5. je;ijapd; fy;tpj; jFjp

m. Kiwahd fy;tp fw;fhjtH ( )

M. gs;sp gbg;G ( )

,. gl;ljhhp ( )

<. KJfiy gl;ljhhp ( )

6. jhapd; fy;tpj; jFjp

m. Kiwahd fy;tp fw;fhjtH ( )

M. gs;sp gbg;G ( )

,. gl;ljhhp ( )

<. KJfiy gl;ljhhp ( )

7. jhapd; Ntiy

m. Ntiyf;Fr; nry;gtH ( )

M. Ntiyf;Fr; nry;yhjtH ( )

8. FLk;g tUkhdk; (&gha; / khjk;)

m. &. <1000 ( )

M. &. 1001 – 5000 ( )

,. &. 5001 – 10000 ( )

<. &. > 10000 ( )

9. FbapUg;G

m. efuk; ( )

M. fpuhkk; ( )

10. czT Kiw

m. irtk; ( )

M. mirtk; ( )

,. Kl;il irtk; ( )

APPENDIX I_2

gFjp – 2

Jhpj czT cz;Zk; gof;fk; gw;wp mwpAk; gbtk;

epge;jidfs; :

- fPNo nfhLf;fg;gl;Ls;s Nfs;tpfis ftdkhf gbj;J rhpahd tpilf;F Neuhf (✓) FwpaplTk;.
- Ma;thsH mbg;gil msTfis mse;J rhpahd msTfSf;F Neuhf (✓) FwpapLthh;.

1. cauk; (nr.kP.) (ruhrhpahf)

m. <140 ( )

M. 140 – 160 ( )

,. >160 ( )

2. vil (fp. fp) (ruhrhpahf)

m. <35 ( )

M. 35 – 65 ( )

,. >65

3. gpvk;.I (ruhrhpahf)

m. <20 ( )

M. 20 – 25 ( )

,. >25 ( )

4. gs;spf;F tof;fkhf nfhz;L nry;Yk; jpz;gz;lk;

m. fha;fwpfs; kw;Wk; goq;fs; ( )

M. Ny];> FHFNu kw;Wk; gy ( )

,. gp];fl; ( )

<. ,dpg;G jpz;gz;lq;fs ( );

5. Xa;T Neuq;fspy; Jhpj czT cz;Zk; gof;fk; cs;sjh?

m. Mk; ( )

M. ,y;iy ( )

6. (Jhpj czT cz;Zk; gof;fk; cs;sJ)Mk; vd;why;>

m. njhiyf;fhl;rp ghh;f;Fk;NghJ ( )

M. jpiuauq;Ffspy; ( )

,. filtPjpf;F nry;Yk;NghJ ( )

<. tpisahlr; nry;Yk;NghJ ( )

c. ,ilNtis Neuq;fspy; ( )

7. vj;jid Kiw Jhpj czT cz;Zk; gof;fk; cs;sJ

m. ,y;iy ( )

M. thuj;jpw;F 1 – 3 Kiw ( )

,. thuj;jpw;F 4 – 6 Kiw ( )

<. jpdKk; ( )

8. ifr;nryTf;fhf fpilf;Fk; gzk; (&gha; / thuk;)

m. ,y;iy ( )

M. <50 ( )

,. >50 ( )

9. vq;fpUe;J Jhpj czT gw;wpa tpguq;fis mwpe;J nfhs;tPHfs;

m. MrphpaHfs; ( )

M. Clfk; ( )

,. FLk;g egHfs ( );

<. ez;gHfs; my;yJ Njhopfs; ( )

c. cly; eyk; NgZgtHfs; ( )

10. tof;fkhf rhg;gpLk; Jhpj czTfs;

m. ,y;iy ( )

M. FspHg;ghdq;fs; (ngg;rp> Nfhf;Nfhyh) ( )

,. nehWf;Fj; jPdp tiffs; ( )

<. EhLy;];> gpiuL iu];> gg;];> ghdpG+hp ( )

c. tWj;j khkprk; (rpf;fd; 65> rpy;yp rpf;fd; ( )

C. kw;Wk; gy ( )

APPENDIX I_3

gFjp – 3

Jhpj czit gad;gLj;Jtjhy; Vw;gLk; tpisTfs; gw;wp mwpAk; gbtk;

1. Jhpj czT vd;gJ_____.

m. filfspNyh my;yJ cztfq;fspNyh thq;ff;$ba nghUl;fs; ( )

M. tof;fkhf vy;NyhUk; gad;gLj;jf;$ba czTfs; ( )

,. mjpf msT cg;G> nfhOg;G kw;Wk; fNyhhpfs; cs;s czTfs ( )

<. mjpf msT itl;lkpd;fs; cs;s czTfs ( )

2. nghJkf;fshy; tpUk;gp cz;zf;$ba Jhpj czT tif_____.

m. Njhir ( )

M. G+hp ( )

,. EhLy;]; ( )

<. GNuhl;lh ( )

3. fPo;f;fz;ltw;wpy; vJ rPd Jhpj czT _____.

m. gpiuL iu]; ( )

M. rNkhrh ( )

,. kQ;Rhpad; ( )

<. gg;]; ( )

4. Jhpj cztpy; Gw;W Nehia Vw;gLj;Jk; cl;nghUs; _____.

m. Nrhah rh]; ( )

M. m[pdhNkhl;Nlh ( )

,. fuk;krhyh ( )

<. Nrhlh khT ( )

5. ngg;rp> Nfhf;Nfhyh Kjypa ghdq;fspy; cs;s nfl;l cl;nghUs; _____

m. fhy;rpak; ( )

M. nkf;dPrk; ( )

,. ry;Ngl; ( )

<. khyj;jpNahd; ( )

6. EhLy;]py; mjpfkhf ,Uf;Fk; nghUs; ----------

m. NfhJik ( )

M. RitA+l;bfs; kw;Wk; Gl; mbf;btp];(mbikahf;fpfs;) ( )

,. ry;Ngl; ( )

<. mjpf cg;G ( )

7. Jhpj cztpy; epwKk; kzKk; juf;$ba cl;nghUs; ----------.

m. Gl; mbf;btp] ( );

M. fy; cg;G ( )

,. Nrhlh cg;G ( )

<. NfhNfh Jhs; ( )

8. nkd; ghdq;fspy; cs;sJ _____.

m. Fiwthd rHf;fiu ( )

M. Fiwthd rhf;fNud; ( )

,. Fiwthd mbikahf;fpfs; ( )

<. Fiwthd fhy;rpak; ( )

9. kPz;Lk; kPz;Lk; #LgLj;jpa vz;nzia gad;gLj;Jtjhy; Vw;gLk; tpisT _____.

m. fy;yPuy; nray; ,og;G ( )

M. Gw;W Neha; ( )

,. rHf;fiu Neha; ( )

<. rpWePuf ghjpg;G

( )

10. fhg;gpd; mjpf msTs;s ghdq;fis gUFtjhy; Vw;gLk; gpd;tpisTfs; _____.

m. fha;r;ry;> the;jp ( )

M. uj;j nfhjpg;G> gak; ( )

,. ftdf;FiwT> eLf;fk; ( )

<. MHtf;FiwT> Qhgff; FiwT ( )

11. mjpf msT nkd;ghdq;fis Fbg;gjhy; Vw;gLtJ _____.

m. Njhy; Neha;fs; ( )

M. vYk;G Neha;fs; ( )

,. fy;yPuy; Neha;fs; ( )

<. rpWePuf Neha;fs; ( )

12. tWj;j nkhWnkhWg;ghd czTg;nghUl;fis jpdKk; cztpy; Nrh;j;Jf; nfhs;tjhy; Vw;gLk; ghjpg;G

m. ,uj;j mOj;jk; mjpfhpg;G ( )

M. ,uj;jjpy; rHf;fiu mjpfkhjy ( );

,.; ijuha;L Rug;gpapy; tPf;fk; ( )

<. Gw;W Neha; ( )

13. nrhj;ijg;gy; tUtjw;Fk;> cly; gUkd; Mtjw;Fk; fhuzkhd nghUs; _____.

m. gg;]; ( )

M. gPrh ( )

,. til ( )

<. kpl;lha;fs; ( )

14. nfl;l nfhOg;G mjpfkhf fhzg;gLk; czT _____.

m. gPrh ( )

M. rhd;nt[; ( )

,. EhLy;]; ( )

<. gpiuL iu]; ( )

15. nfl;l nfhOg;G clypy; mjpfhpg;gjhy; tUk; ghjpg;G _____.

m. tapw;Wg;Nghf;F ( )

M. Fly; Gz; ( )

,. ,uj;j nfhjpg;G ( )

<. rHf;fiu Neha; ( )

16. gNuhl;;lh nra;a mjpfkhf gad;gLj;JtJ _____.

m. ghkhapy; ( )

M. lhy;lh ( )

,. Jha;ikgLj;jg;gl;l vz;nza; ( )

<. Njq;fha; vz;nza; ( )

17. Jhpf czit mjpfkhf cl;nfhs;s Jhz;LtJ _____.

m. mjpf fNyhhp ( )

M. Fiwthd Cl;lr;rj;J ( )

,. fhiy czit jtpHj;jy; ( )

<. vspjpy; fpilj;jy; ( )

18. tlehl;L Jhpj czT gof;fq;fis mjpfhpg;gjhy; Vw;gLtJ _____.

m. Fly; ghjpg;Gfs; ( )

M. vYk;G ghjpg;Gfs; ( )

,. `hHNkhd; Rug;gjpy; khw;wq;fs ( )

<. ,ja ghjpg;Gfs; ( )

19. khkpr czit mjpfkhf cztpy; NrHj;Jf;nfhs;tjhy; ghjpf;fg;gLk; cWg;G _____.

m. %is ( )

M. EiuaPuy; ( )

,. ,Ujak; ( )

<. rpWePufk;

( )

20. czT Kiwfs; vjd; mbg;gilapy; cUthf;fg;gl Ntz;Lk; _____.

m. tpUg;gk; ( )

M. vspjhf jahhpf;f$baJ ( )

,. fpilf;ff;$ba czTfs; ( )

<. czT Kf;Nfhzk; ( )

21. cliy MNuhf;fpakhf itj;Jf;nfhs;s jtpHf;f Ntz;baJ _____.

m. Fiwe;j fNyhhp czTfs; ( )

M. mjpf fNyhhp czTfs; ( )

,. mjpf nfhOg;G czTfs; ( )

<. mjpf khTr; rj;J czTfs; ( )

22. clYf;F MNuhf;fpaj;ij jUk; czT jahhpg;G Kiw _____.

m. tWj;jy; ( )

M. ed;F vz;nzapy; tWj;jy; ( )

,. neUg;gpy; RLjy; ( )

<. Ntfitj;jy; ( )

23. ey;y Qhgf rf;jpf;Fk;> $He;J ftdpf;Fk; jd;ikia ngw jtpHf;f Ntz;baJ _____.

m. Nrhlh ghdq;fs; ( )

M. rPd Jhpj czTfs; ( )

,. vz;nzapy; ed;F nghwpj;j czTfs; ( )

<. Gor; rhWfs; ( )

24. Jhpj czT ml;ilfspy; cs;s rpfg;G epw FwpaPL czHj;JtJ ----------.

m. cly; MNuhf;fpaj;jpw;F ey;yJ ( )

M. vr;rhpf;ifNahL cl;nfhs;s Ntz;bait ( )

,. Neha;fis Vw;gLj;Jk; czT ( )

<. jilnra;ag;gl;l czT ( )

25. gPrhTf;Fhpa epwf;FwpaPL ----------.

m. rpfg;G ( )

M. ePyk; ( )

,. kQ;rs; ( )

<. gr;ir ( )

APPENDIX I_4

gFjp – 4

Jhpj czT kdg;ghd;ikia msf;Fk; msTNfhy;

mwpTiufs; :

- fPo;f;fz;l thf;fpaq;fspy; vJ rhp my;yJ jtW vd;W mjw;Fhpa fl;lq;fspy; (✓) nra;aTk;.;

t.vz;.	Nfs;tpfs;	rhp	jtW
1.	nkd;ghdq;fs; clYf;F ed;ik juf;$baJ		
2.	Jhpj czit vg;nghOJk; cl;nfhs;tjpy; ve;j jtWk; ,y;iy		
3.	Jhpj czT cl;nfhs;Sjy; ehfhPfkhdJ		
4.	Jhpj czit tpsk;gug;gLj;JtJ jil nra;ag;gl Ntz;Lk;.		
5.	Jhpj czT cl;nfhs;Sjiy jtpHj;jy; clYf;F NfL tpistpg;gjhFk;		
6.	Jhpj cztpy; cs;s cl;nghUl;fis mwpe;J nfhz;L gpwF thq;f Ntz;Lk;		
7.	ngw;NwhHfspd; ftdf;FiwTjhd; Foe;ijfis Jhpj czT cl;nfhs;Sjiy Jhz;LfpwJ.		
8.	Jhpj czit xUehisf;F xUKiw vLj;Jf;nfhs;syhk;		
9.	Jhpj czT ,sk;gUtj;jpdUf;fhNt jahhpf;fg;gl;ljhFk;.		

10.	Jhpj czT cl;nfhs;Sjiy jLf;Fk; Kf;fpa topfspy; Ra fl;Lg;ghLk; xd;W		

APPENDIX- I

LESSON PLAN ON HAZARDS OF EATING FAST FOOD

INTRODUCTION

"Food is an important part of a balanced diet".

-Fran Lebowitz

Fast food = bad eating habits

In today's world scenario, fast food has become a prominent feature of diet for adolescents. The rapidly changing food consumption patterns and diet transition emerging in the society due to economic growth and new lifestyle choices demands variety food product. It is clear that fast food is generally unhealthy. Many research studies shows that consuming fast food is a nutritional hazard and it only provides empty calories. This kind of food has no vitamins and minerals. Fast food is loaded with saturated fat and high calories, and its low in fiber and nutrients. When these types of foods are eaten, the body is forced to produce its own enzymes to convert the empty calories into usable energy. From this it is clear that fast food will cause obesity and associated health hazards. Nutritional intake during adolescence is important for growth, long term health promotion and development lifelong eating behaviors. Nutritional intake during this period may have long term health implications. Several physical, psychological and behavioral changes may affect food habits during adolescence and have long term consequence on adult health status.

Time	Specific Objectives	Content	Teachers Activity	Learner Activity	A.V aids	Evaluation
2mts	Students will be able to say the meaning of fast food and define the hazards of fast food	**Definition:** ***Fast food*** It is refers to the foods that are high in salt, fat or caloric value • Low nutritive value • Foods which directly or indirectly pose health hazards ***Hazards of fast food:*** It refers to consumption of fast foods, that pose a health problem either acute (immediate) or chronic (long term) exposure to it. It includes the hazards like obesity, heart diseases cancer, psychological disorders diarrhea, eating disorders, bone and joint disorders etc.	Lecture cum discussion	Listening	LCD	What is fast food and hazards of fast food?
3mts	Students will be able to list out various types of fast food	**Types of fast food** • Burgers, sandwiches, hot dogs, cold drinks and soda are easily available and have negligible prices. • Tacos, nacos, and vegetarian and wraps are also some of the popular fast foods. • There are Chinese fast food which includes an assortment of noodles, machurians, momos, rice and crispy fried nuggets that are sold either at proper food joints.				What are the types of fast foods?

3 mts	The students will be able to enlist the harmful ingredients of various fast foods.	• India, also has its share of fast food with somosa, vada, poori, parottas, panipoori, etc., **Fast food and health concerns**: Most of the fast food contain high amount of sodium, which increases and aggravates the risk of high blood pressure There are many harm full influences of fast food on health such as obesity, diabetes, heart problems or any other chronic disorders. Obesity can also lead to other complications like increase in the cholesterol level, blocking of the arteries, the increased risk of coronary disease and physical discomfort. **HARMFUL INGREDIENTS OF VARIOUS FAST FOODS** 1. **Soft drinks:** *a. Caffeine* A stimulant found in coffee and tea which stimulate central nervous system *b. Saccharine:* The sugar substitute contain $1/8^{th}$ calorie per teaspoon and said to be about 400 times sweeter than sugar *c. Soda pop:* A sodium salt of carbonic acid used in soft drinks.	Lecture cum discussion	Listening	LCD	What are the harmful ingredients of fast foods?

		d. Flavor enhancers *e. Phosphoric acids* f. *Insecticides-* Chemical used to control or kill the insects, lindane, malathion and DDT. 2. **Snacks:** A light informal meal is known as snack a. Most of the snack contain high amount of salt and oil 3. **Chewing gums and chocolates:** A. High sugar B. Saccharine 4. **Food items:** Food stuff prepared in fast food restaurant or shop at low cast a. High fat b. Ajinomoto c. Repeated use of same oil d. Food addictives These are non nutrients substances, which are added intentionally to food, generally in small quantity, to improve appearance, favor, texture or properties	Lecture cum discussion	Listening	LCD	

3mts	The students will be able to explain the effect of fast food on the body	○ DDT ○ Mono sodium glutamate ○ Aspartame **Effects of fast food on the body** The famous microbiologist Dr. Michael F. Jacobson coined the phrase "Junk Food" in 1972 to describe unhealthy or non-nutritious food. There are numerous additives that must be used in Junk food and they can cause health problems. For example Monosodium glutamate (MSG), is a flavor enhancer commonly added to Chinese food, canned vegetables, soups and processed meats that causes hypothyroidism ,headache, nausea, weakness, difficulty in breathing, drowsiness, rapid heartbeat, and chest pain. Eating fast food and leading sedentary life style leads to obesity. Obesity leads to other complications like increasing the cholesterol level, blocking the arteries, the increased risk of coronary diseases, in addition to the general physical discomfort posted by the extra weight. Fast food is also additive and hence it is very difficult to give up on their greasy and fatty foods and carbonated drinks and switch to healthier options. ***Ill effects of cholesterol:*** Meat in fast food is very dangerous for the health. Meat contains cholesterol and hence leads to the accumulation of high cholesterol in the body. Cholesterol	Lecture cum discussion	Listening	LCD	What are the effects of fast food on the body?

		molecules can accumulate in the arteries and lead to clogging or thickening of the arteries. Thinking or clogging of arteries can lead to an obstructed blood flow and affect the blood pressure. In case the artery, which carries blood to the heart, gets clogged, it can result in heart attacks or even heart failure in extreme cases where blood blow is completely obstructed. ***Sodium and increased blood pressure*** Most of the se quick and convenient meals contain high amount of sodium, which increases and aggravates the risk of high blood pressure. According to the recommendations of the national research council of the national academy of sciences 1,200-1,500 mg of sodium is the daily sodium requirement for adults. Keeping this figer in mind, you should also know that the regular table salt that we consume contains 40% sodium and a single teaspoon of table salt, contains 2.300 mg of sodium. Although the body requires minimum quantities of sodium, too much sodium contributes to high blood pressure. Sodium can also lead to building up of fluids in case of people who are suffering from people with congestive heart failure, cirrhosis, or kidney disease. Effects of fast food: dealing with trans fat Trans fat which is infamous as the worst type of fat, is found abundantly in various fast foods. Trans fat is considered as the most harmful type of fat because it not only	Lecture cum discussion	Listening	LCD	

		increases the bad cholesterol (low density lipoprotein) levels but also reduces the good cholesterol (high density lipoprotein) levels, most commonly found in ingredients in all the processed foods. Foods that contain artificial trans fat contain up to 45% more trans fat as compared to their natural fat counterparts. Our brain is the organ in affecting how we think and move. Fast food and junk food are very low in nutrients; instead they are full with colorings, flavors and preservatives. Researchers have shown that junk food might cause dyslexia, ADHD (attention deficit hyperactivity disorder) and worse is autism. An individual's mood and attention are highly influenced by the food taken, which means it will affect the concentration Why are fast foods considered to be so bad: It is widely known that most fast foods are full of harmful carbohydrates, fat and calories. With the spread of awareness about how certain foods can cause obesity and other ill effects, people want to know how much saturated fat, cholesterol, carbohydrate, sugar, and sodium they are consuming in the fast foods they eat. Hence, information about fast food nutrient facts has become as important as the nutritional information provided on food products purchased in grocery stores. With the fast food information now available, people are beginning to understand why these food cause weight problems, diabetes, and high cholesterol. When you look at the fast food nutritional facts you will be staggered by the amount of	Lecture cum discussion	Listening	LCD	

8mts	Students will be able to enumerate various hazards of fast food.	calories alone these foods contain. The saturated fat in fast foods are directly linked to heart problems, the high sodium contain causes high blood pressure, and the high amounts of refined carbohydrate and suger leads to diabetes. Therefore, a regular diet of those harmful ingredients has the potential of leading to many health problems. **Hazards of fast food**. ***Soft drinks:*** ❖ Soft drinks pose health risks because of what they contain (e.g., sugar and various additives) and what they replace in the diet. ❖ Soda pop present in soft drink adds unnecessary non nutritious calories to the diet, which lead to obesity (abnormal growth of adipose tissue due to the enlargement or increase in number of fat cells).people drink soft drinks instead of milk or other products will have lower calcium intakes, low calcium intakes contributes to osteoporosis, a disease leading to fragile and broken bones. ❖ Colas contain phosphorus can lower the level of calcium in the blood levels to osteoporosis. ❖ Aspartame (a sugar substitute) in coke can cause cancer. ❖ A cola beverages acidified with phosphoric acid can cause kidney stones. ❖ Coffine , a mildly additive stimulant drug is present in most cola products	Lecture cum discussion	Listening	LCD	What are the hazards fast foods?

		can cause nervousness, irritability, sleeplessness and headaches, lack of concentration ❖ Artificial sweeteners like saccharine, aspartame and monosodium glutamate contain zero calories. ❖ Studies showed that certain insecticides like lindaine, DDT and malathion present in cola beverages leads to reduce immunity and disorders to reproductive organs. ***High salty and crispy items*** • It can cause hypertension (high blood pressure than normal) and heart diseases in later life. • Snacks consumption in between the meals results obesity and overweight. ***chewing gum candy and chocolates*** ❖ Constant use can cause tooth decay. ❖ Chocolates also contain coffine and fat, & sugar which leads obesity related diseases. ❖ Food items ❖ Noodles, belpuri, French fries, hamburgers, puffs, panipuri, vadai, bhaji, and foods which are prepared using repeatedly heated oil etc ❖ High properties of saturated fat can cause hypertension and heart	Lecture cum discussion	Listening	LCD	

3mts	The students will be able to explain the factors promoting fast food	diseases. ❖ Lack of food sources of fiber can cause constipation (hard stools). ❖ High sugar content can cause diabetes. ❖ Ajinomoto which is an ingredient of fast foods can cause cancer. **Factors promoting fast food**: ***1. Skipping meals:*** Adolescence may skip the meal because of irregular schedules breakfast and lunch are the meals most often missed. *The source of skipping breakfast:* o Lack in time o Early school activities o Poor appetite in the morning o Strategy for weight control *Effects of omission of breakfast:* • After school performance • Not to compensate for their losses at other meals. • Deficiency of iron, calcium and other vitamins • High intake of fast foods ***2. Snacking:*** Teenagers seldom conform to a regular pattern of three meals per day.	Lecture cum discussion	Listening	LCD	What are the promoting factors of fast food?

		Snacks in between meal will contribute high calories but low nutrients. ***3. Fast foods:*** Reasons for fast food consumption ▪ Adolescence are more independent ▪ Busy after school schedules ▪ In expensiveness of items ▪ Familiar and available almost any hour of the day or night ▪ Some fast foods are even ordered through phone call and the foods delivered at home itself ▪ Adolescence socialize with their peers in fast food establishments ▪ Fast tempered music ▪ Fast food has attractive and advertised in all mass media ***Impact of fast foods on the diet depends on:*** ✓ Frequency of visit to fast food corners ✓ Food choices that are made ✓ Traditional fast foods are: Low in iron, calcium, vitamin, vitamin A and C, fiber and folic acid and high in sodium, cholesterol and saturated fat.	Lecture cum discussion	Listening	LCD	

2mts	The Students will be able to verbalize the ways to avoid the risks of fast food	**Ways to avoid the risks of fast food** ➢ Make fast food weekly event and slowly reduce the conception of it. ➢ Every time you feel the urge to have fast food, remind yourself of the bad effects it can have on your health. ➢ Pick out health salads and other food items which will minimize if not eliminate the risks. ➢ Try to avoid soda or other soft drinks and instead consume fresh fruit juices and smoothies. ➢ Consume fast food that has been cooked using healthy cooking methods like grilling or roasted instead of deep frying. ➢ Make aware about fast food hazards acute and chronic while talking with your friends.	Lecture cum discussion	Listening	LCD	What are the ways to avoid fast food hazards?
2mts	The students will be able to describe the good eating habits of adolescence	**Recommendations:** ***Healthy eating habits in adolescence*** ➢ Adolescence should be advised not to skip meals, particularly breakfast ➢ Eat regular meals according to the food pyramid ➢ Improve the overall quality of their diets with nutritious snacks such as fresh fruits and vegetables ➢ Iron fortified cereal and low fat milk ➢ Vegetarian pizza				What are the healthy habits of eating foods?

		➢ Low fat frozen yogurt ➢ Avoid high calorie, high fat, high sugar, coffee, tea, Cole, nutrient poor snacks such as candy, pie, cakes, cookies, chips etc., ➢ Teach adolescence how to make wise food restaurants ➢ Choose healthy snacks ➢ Supplement fast foods with calcium rich foods and fresh fruits and vegetables				
2mts		**Summary:** So far we have discussed on concept of fast food, meaning, definition, types, effects of fast food and recommendations, nutritive value of various fast foods and health hazards.				
2mts		**Conclusion:** In the world we have god and bad for each and everything. In dietary habits also we have good foods and bad foods. We must take the good foods and good eating habits and prevent many diseases and promote healthy life.				

Jhpj czit gad;gLj;Jtjhy; Vw;gLk; tpisTfs; :

Kd;Diu:-

Kw;fhyj;jpy; vspa Kiwapy; kdpjd; czit jahhpj;J cl;nfhz;lhd;. Mdhy; ,g;NghJ tsh;e;J tUk; cyfj;jpy; ek;Kila czT tiffs;> jahhpg;Gfs;> gof;f tof;fq;fspy; gy;NtW khw;wq;fs; cs;sd. ,jpy; Jhpj czT kpfTk; gad;gLj;jg;gl;L tUfpd;wJ. Fwpg;ghf gs;sp khzt khztpah; ,e;j Jhpj czT gof;fj;jpw;F mbikahfpd;whh;fs;. vdNt Jhpj czit gw;wpAk; mjd; tpisTfis gw;wpAk tpopg;Gzh;T Vw;gLj;JtJ jw;Nghija gs;sp khzth;fSf;F kpfTk; Kf;fpakhd xd;whFk;. ,ijg;gw;wp ,e;j FWk;glj;jpy; gs;sp khzth;fshfpa cq;fSf;F fw;Wju tpisfpNwd;.

tiuaiw:-

Jhpj vd;gJ cztpy; mjpf msT cg;G> nfhOg;G> kw;Wk; Fiwe;j msT Cl;lr;rj;J cs;sJk;> clYf;F NfL tpistpf;Fk; czT nghUSkhFk;.

NfLtpistpf;Fk; Jhpj czTfs;:-

,it clYf;F cldbahfNt ePz;l fhykhfNt Jhpj czit cl;nfhs;tjhy; Vw;gLk; ghjpg;Gfs;. mit cly; gUkd;> ,ja Neha;fs;> Gw;WNeha;> tapw;W Nghf;F> Fly;Gz; vOk;G kw;Wk; %l;L Neha;fs;> ,uj;j nfhjpg;G> kw;Wk; `hh;Nkhd; ghjpg;Gfs; Vw;gLfpwJ.

Jhpj cztpd; tiffs;:-

gytifahd Jhpj czTfs; ,e;j cyfj;jpy; cs;sd mit>

- **ntspehl;L czT tiffshd:-**
    - gh;fh;> gPrh> rhd;ny[;> rpf;fd; gpiu> kw;Wk; ngg;rp> nfhf;fNfhyh> Nrhlh Kjypa Fsph;ghdq;fs; vspjpy; ek; ehl;bYk; fpilf;fpwJ.
- **rPdh Jhpj czT tiffs;:-**
    - ELy;];> khf;FNuhd;];> khNkh];> gpiul; iu];> fphpy; rpf;fd;> kw;Wk; gy
- **,e;jpa Jhpj czTfs;:-**

- rNkhrh> g[;[p> til> ghdpg+hp> gNuhl;h> rpy;yp rpf;fd;> rpf;fd; 65 kw;Wk; gy

➢ **Ngf;fhp tiffs;:-**

- gg;];> kpl;lha;fs;> Nff;> Fsph;ghdq;fs;> kw;Wk; Ny];> Fh;FNu> Kjypad ghf;fl;Lfspy; milj;J tpw;f$ba kPz;Lk;> kPz;Lk; vz;nzapy; nghwpj;j jpd;gz;lq;fs; nehUf;F jPdp tiffs;.

Jhpj cztpy; cs;s cl;nghUl;fs;:-

❖ **fhgpd;:-**

- fhgp> ngg;rp> nfhf;fNfhyh Kjypa ghdq;fspy; fhg;gpd; cs;sJ. ,it euk;G kz;lyj;ij Jhz;l $ba nfhUshFk;.

❖ **rhf;fNud;:-**

- rh;f;fiuf;F gjpyhf ,dpg;G RitjUk; xU tifahd cl;nghUshFk;. xU Njf;fuz;b msT rhf;fNud;> rh;f;fiuapd; msit tpl 400 Kiw ,dpg;Gr; Rit juf;$bajhFk;.

❖ **Nrhlh ghg;:-**

- Fsph;ghdq;fspy; Fwpg;ghf Nrhlhtpy; fhh;Nghdpf; mkpyk; mjpfkhf cs;sJ. ehk; Nrhlh Fbj;jhy; rPuzkhFk; vd;W jtwhd fUj;ij nfhz;bUf;fpNwhk;. Mdhy; ,it Flw;Gz; cUthf;FfpwJ.

❖ Jhpj cztpy; **gh];Nghhpf; mkpyk**; cs;sJ.

❖ **G+r;rp nfhs;sp kUe;Jfs;:-**

- czT gjg;gLj;Jtjw;fhf cgNahfpf;fg;gLk; nghUl;fshd ypz;Nld;> khyj;jpNahd;> bbb kw;Wk; vj;jpypd; Mfpait.

- **jpd;gz;lq;fs;:-**
    - jpz; gz;lq;fspy; mjpf msT cg;G cs;sJ. ,it kPz;Lk;> kPz;Lk; cgNahfpj;j vz;nzapy; ,Ue;J jahhpf;fg;gLfpwJ. kpl;lha;fspy; mjpf msT rh;f;fiu kw;Wk; rhf;fNud; cs;sJ.
- **czT tiffs;:-**
    - thrid nghUl;fs;
    - m[pdh Nkhl;Nlh
    - kPz;Lk;> kPz;Lk; cgNahfpj;j nfl;l vz;nza;
    - mbikahf;f $ba cl;nghUl;fs;

czTfSld; ,tw;iw fyg;gjhy; ghh;g;gjw;Fk;> Efh;tjw;Fk;> gjg;gLj;Jtjw;Fk; VJthfpd;wd. mit bbb NkhNdh Nrhbak; GSl;Nkl; kw;Wk; m];ghh;lNkd;.

Jhpj czthy; clypy; Vw;gLk; ghjpg;Gfs;:-

cly;gUkd;:-

mjpf msT Jhpj czT cl;nfhz;L Fiwthd Ntiy nra;jhy; cly;gUkd; Vw;gLfpwJ. cly; gUkdhy; gy tifahd gf;f tpisTfs; Vw;gLfpd;wd. mit ,uj;jj;jpy; mjpf msT nfl;l nfhOg;G> ,uj;j Foha; milg;G> ,ja Neha;fs;> kw;Wk; gy;NtW cly;fbdq;fshFk;.

kPz;Lk;> kPz;Lk; Jhpj czit cz;z Ntz;Lk; vd;fpw vz;zj;ij cUthf;Fk; nghUl;fs; Jhpj czTfspy; ,Ug;gjhy; ,itfis tpl;L tpl Kbahky; jtpf;Fk; epiyAk; Vw;gLfpwJ.

nfl;l nfhOg;gpdhy; tUk; ghjpg;Gfs;:-

khkpr Jhpj czT kpfTk; NfL tpistpf;f $bajhFk;. khkprj;jpy; cs;s nfl;l nfhOg;G ,uj;j Foha;fspy; gpbj;J ,uj;j Foha; milg;G Vw;gLfpd;wJ. ,e;j ,uj;j Foha; milg;G ,Ujaj;jpy; Vw;gLtjhy; khuilg;G cz;lhfpwJ.

cg;G kw;Wk; ,uj;j nfhjpg;G:-

cldbahf kw;Wk; Rygkhf fpilf;f $ba czTfspy; mjpf msT cg;G & fNyhhpfs; ,Ug;gjhy; ,uj;j nfhjpg;G Vw;gLfpwJ. xU kdpjd; ruhrhpahf vLj;J nfhs;s $ba Ntz;ba cg;gpd; msT 1200-1500 kpfp MFk;. xUtUf;F Njf;fuz;b xU ehisf;F ½ Njf;fuz;b cg;G NghJkhdjhFk;. mjpf msT Nrhbaj;ij cl;nfhs;tjhy; ,uj;j nfhjpg;G Vw;gLfpwJ. NkYk; ,jdhy; clypy; ePh; Njq;fp tPf;fk; Vw;gl;L ,ja Neha;fs;> rpWePuf Neha;fs; kw;Wk; fy;yPuy; ghjpg;G Vw;gl fhudkhfpd;wd.

kQ;r nfhOg;G:-

,J mjpfkhf Jhpj czTfspy; cs;sJ. kQ;r nfhOg;G vd;gJ kpfTk; Nkhrkhd xU nfhOg;ghFk;. Vndd;why; ,J nfl;l nfhOg;ig (LDL) clypy; clYf;F Njitahd ey;y nfhOg;gpd; msit (HDC) Fiwj;J tpLfpwJ. nraw;iffshf fpilf;Fk; nfhOg;ghy; 45 rjtPjk; nfhOg;G kQ;r nfhOg;ghFk;.

Jhpj czit Vd; clk;gpw;F NfL vd;fpNwhk;?.

nghJthf Jupj cztpy; NfL tpistpf;Fk; khTrj;J> nfhOg;G> kw;Wk; fNyhhpfs; cs;sd. Jhpj czitAk; mjd; tpisTfisAk; gw;wpa tpopg;Gzh;T Vw;gLj;Jk; NghJ> kf;fSf;F jhk; cz;Zk; cztpy; vt;tsT nfhOg;G> Gujk;> khTrj;J> rh;f;fiu kw;Wk; cg;G cs;sJ vd;gij mwpa tpUk;Gfpwhh;fs;. ,e;j tpguq;fs; rpy Jhpj czT ml;ilfspy; ghh;f;fyhk; ,e;j msTfis ghh;f;Fk; NghJ mit vt;tsT mjpfkhd fNyhhpfis clypy; Nrh;j;J tpLfpd;wd vd;gij czh;e;J nfhs;s KbAk;. ,jd; %ykhf kf;fs; jhk; vjdhy; cly; gUkdhfpwhh;fs; vd;gij Ghpe;J nfhs;s KbAk; ,e;j ml;ilfspy; cs;s Cl;lr;rj;Jf;fs; kw;Wk; cl;nghUl;fs; ghh;g;gjd; %yk; ,jd; NfLtpistpf;Fk; fhuzpfisAk; ehk; fhz KbAk;. ,jpy; cs;s nfl;bahd nfhOg;G ,ja Neha;fs; tu fhuzkhfpd;wd. mjpf msT Nrhbak;> ,uj;j nfhjpg;G Vw;gLtjw;Fk;>

ehh;rj;J> ePf;fg;gl;l khT nghUl;fs; rh;f;fiu Neha; ,uz;lhk; tif tUfpwJ;. vdNt ,e;j Jhpj czT mjpfk; cl;nfhs;tjhy; gy tifahd ghjpg;GfSf;F cs;shf Ntz;ba epiyAk; Vw;gLfpwJ.

vg;gb Jhpj cztpd; ghjpg;Gfis jLg;gJ?

- Jhpj czT cl;nfhs;Stij thuj;jpw;F xU Kiw vd;W Fiwj;J gbg;gbahf Fiwg;gJ.
- Jhpj czT cl;nfhs;s Ntz;Lk; vd;fpw vz;zk; tUfpd;w Nghnjy;yhk; mjdhy; Vw;gl$ba gpd; tpisTfis epidtpw;F nfhz;L tu Ntz;Lk;.
- clYf;F ed;ik gaf;Fk; czTfis Njh;e;njLj;J cl;nfhs;s Ntz;Lk;.
- Fsph;ghdq;fs;> Nrhlh Kjypatw;iw jtph;j;J ,aw;ifahf fpilf;f $ba gorhWfis Fbf;f Ntz;Lk;.
- Ntf itj;j kw;Wk; vz;nza;apy;yhky; tWj;j czT kw;Wk; jhzpa tiffs; gr;ir fha;fwpfs;> fPiufs;> Kjypatw;iw cl;nfhs;s Ntz;Lk;.
- cq;fsJ ez;gh;fSlNdh my;yJ NjhopfSlNdh kw;Wk; cwtpdh;fSlNdh ciwahLk;NghJ Jhpj czT ghjpg;Gfis gw;wpa tpopg;Gzh;it Vw;gLj;j Ntz;Lk;.

,tw;why; Jhpj cztpdhy; tUk; ghjpg;Gfis jLf;f Kbak;.

Jhpj cztpdhy; cz;;lhFk; ghjpg;Gfs; fPo;fz;ltw;iw nghWj;Js;sd.

- Jhpj czit vj;jid Kiw cl;nfhs;fpNwhk;.
- ve;j mstpw;F cl;nfhs;fpNwhk;.

- ve;j mstpw;F Ntiy kw;Wk; clw;gapw;rpfis nra;fpNwhk; vd;gij nghUj;Js;sd.

ghpe;Jiufs;:-

tsUk; gUtj;jpw;fhd ey;y czT gof;f tof;fq;fs;.

- ,isQh;fs; fhiy czit jtph;f;fhky; cl;nfhs;s Ntz;Lk;.
- rhptpfpj czT Kf;Nfhzj;jpd;gb czit cl;nfhs;s Ntz;Lk;.
- Cl;lrj;J kpFe;j czT kw;Wk; gor;rhWfis cl;nfhs;s Ntz;Lk;.
- gr;ir fha;fwpfs;> fPiufs;> goq;fs;> ,Uk;Gr;rj;J kpFe;j gUg;G tiffs; Mfpatw;iw mjpfk; cl;nfhs;s Ntz;Lk;.
- fhgp> NjdPh;f;F gjpyhf nfhOg;G ePf;fg;gl;l ghiy cl;nfhs;s Ntz;Lk;.
- mjpf nfhOg;G> mjpf fNyhhp> ,dpg;G tiffis jtph;f;f Ntz;Lk;.
- nfhf;fNfhyh> ngg;rp> Nrhlh Kjypa ghdq;fis jtph;f;f Ntz;Lk;.
- ey;y czTfis Njh;e;njLj;J gps;isfSf;F fw;W jUjy;
- Jhpj czT ml;ilia ghh;j;J mtw;wpy; cs;s Cl;lr;rj;Jf;fis mwpe;J nfhs;sjy;
- fhy;rpa rj;J kpFe;j goq;fs;> fha;fwpfs; cl;nfhs;sNtz;Lk;.

APPENDIX - K

PHOTOGRAPHS

Investigator collecting the data

Investigator educating the students through video assisted teaching programme on hazards of fast food